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THE RAILROAD MAN'S MAGAZINE

AUGUST

THE FRANK A MUNSEY COMPANY NEW YORK AND LONDON

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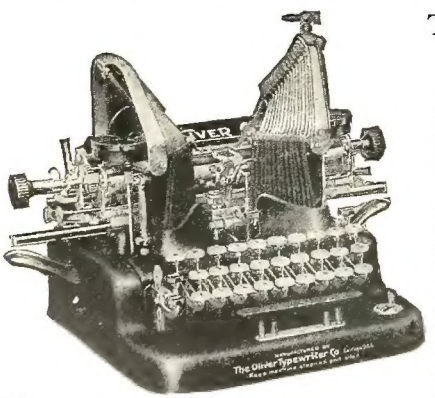

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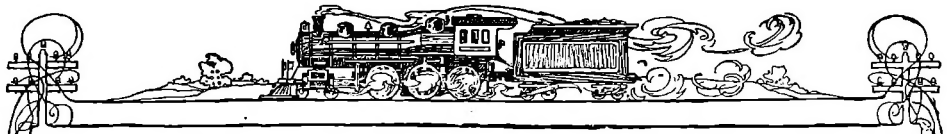

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ISSUED MONTHLY BY THE FRANK A. MUNSEY COMPANY.

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THE RAILROAD MAN'S MAGAZINE

Vol. XII. AUGUST, 1910. No. 3.

Railroad Men Who Are Members of Congress.

Among the Leading Law-Makers of the Nation Are Men Who Began with the Section-Gang and the Roundhouse Crew, Whose Early Struggles Led Them to Success.

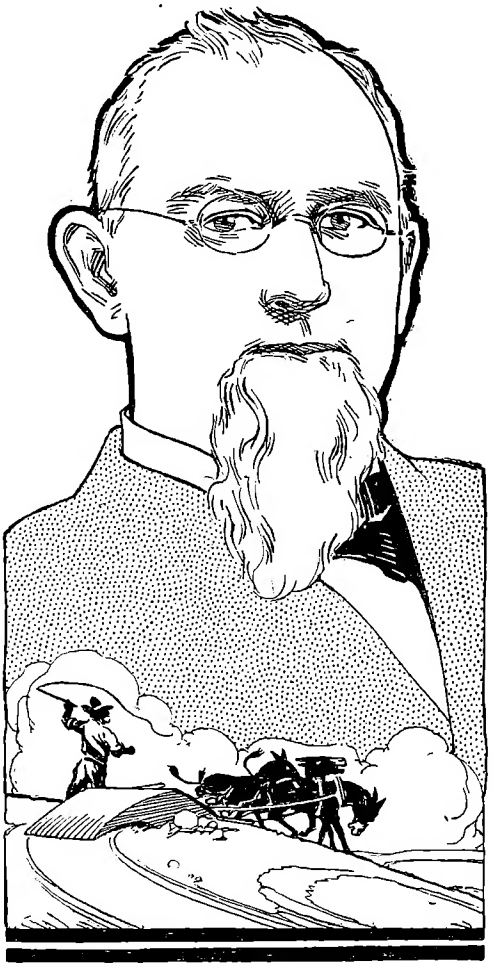
WHEN a man starts in life as a tallow-pot, and looks forward to the time when he will be elected to either the Senate or Congress of the United States, there is a gaping chasm between the two extremes. Yet we publish in this issue of THE RAILROAD MAN'S MAGAZINE the personal stories of some of the most noted men now in our Congress who began life in some of the lowliest positions known to railroading and at a time when the work was not so well advanced nor promotion so certain as it is to-day.

Some of these personal narratives read more like romance than truth. They tell of hardships and of those seemingly insuperable obstacles that block the way of all men who are not born a tag on a money-bag, but must work their way, by their own efforts, to the top.

"Have you ever been a railroad man?" we asked these various men now representing us in Washington, and the invariable reply was, "Have I ever been a railroad man?" accompanied by a smile and a far-away look, as if the speaker was taking himself back to the days that were dear to him—days that he can never forget.

So here, boys, are the true stories of Senator Carter of Montana, Senator Cummins of Iowa, Senator Warren of Wyoming, Senator Shively of Indiana, Senator Perkins of California, Senator Lorimer of Illinois, Senator Nixon of Nevada, Congressman Martin of Colorado, Congressman Anderson of Ohio, Congressman Norris of Nebraska, Congressman Murphy of Missouri, and Congressman Cassidy of Ohio, all of whom are proud of the fact that they are ex-railroad men. We are proud, indeed, to be able to record such a list. There is something about the rough-and-ready life along the right-of-way that puts stamina into men who have undergone its seasoning influence, and makes them

pay little heed to the smaller trials and tribulations that so often prove stumbling-blocks on the uneven road to success. Railroads, from the beginning, have proved poor places for quitters, and the men who have climbed from the ranks and finally won their way to executive seats at the nation's capital are frank in admitting that they have gained much from association with their fellow workmen, and were in the habit of taking hard knocks with a smile.



SENATOR CARTER.

Drawn from a photograph copyrighted by Harris & Ewing.

BEGAN AS FIREMAN.

By Thomas Henry Carter, United States Senator from Montana.

MY railroad career was not of much importance, or of long duration. I began by driving a mule team on the grade of a new road extending west from Clinton, Illinois, and, later, on the Illinois and Southeastern Railroad.

Following this, I drove a team hauling stone, timber, etc., for the roundhouse and small machine-shop built at Pana. I had fully made up my mind that railroading should be my life's work, but fate and the master mechanic willed it otherwise. I never got any higher in railroad work, although I had strong ambition to become a locomotive fireman.

While plowing corn near the Illinois Central tracks, I envied the lot of the men on the passing engines, who seemed to be stirring up a cool breeze and having a good time. I thought it all out while working on the farm, and finally decided that I would be much happier railroading—then I could see the world.

I even concluded that I would like to begin my career as fireman. In my imagination, I lived over the joys that were to come when, with the engineer, I would be flying over the miles of Wild West prairies, the glare of the hot embers scorching my cheek as I fed the engine with coal, and then the wind of the fresh outdoors cooling my face as we flew over the rails.

Oh! it would be life, real and earnest—and one day, when a shower made the ground too wet to plow, I laid off and walked to the roundhouse in the village to make my application.

I was bent on securing a position as fireman, but the formidable appearance of the master mechanic, and the distant attitude of every one about the place, reduced my self-confidence to such a degree that I finally concluded it would be safer to ask for a job wiping engines.

With this reduced purpose in mind, I stayed about the place for half an hour or so while the master mechanic talked with some important-looking persons.

Finally, when the conversation was ended, he stepped aside to look over some detached work, and I accosted him, and with much timidity, many misgivings, and a husky voice, said:

"Mister, I want a job, wiping."

He turned, looked me over from head to

foot, and walked away without making any reply.

This apparently scornful inspection made me conscious of my lack of style. The truth is, my clothes were very meager, consisting of a rough straw hat, check shirt, and blue overalls rolled up pretty well to the knees to keep them out of the mud.

I was barefooted, freckle-faced, and bashful. The first blush of confusion over, I became deeply conscious, humiliated, and angry, but I could do nothing save suffer and walk away.

Mr. Ladd, the master mechanic, was undoubtedly a capable man in his line of business, but he had the brusk manner of the old-time railroader.

He subsequently went to Brazil to take employment as master mechanic of the government railway system, and never returned to this country.

He did not mean to treat me with contempt, nor to hurt my wounded feelings—but he did both. He also put an end to my quest for railroad employment. I never made another trial in that direction.

Mr. Ladd unconsciously did me a great service, for I have ever since treated people with the utmost consideration. We cannot always justly measure the motives of men, and we often judge too harshly; but I have always felt inclined to lend a sympathetic ear to the request of a boy, even if I did not grant his petition.

A boy is supersensitive, particularly during the period of doubtful status when he is neither a man nor a boy. Then he feels awkward, ungainly, and out of place. He lacks the experience which leads to a philosophical view, and every slight inflicts pain and humiliation.

THE HAPPINESS OF HARDSHIP.

By Francis E. Warren, United States Senator from Wyoming.

EARLY in the spring of 1867, I was foreman of the tie-gang of the advance party of men building the Rock Island from Des Moines, Iowa, westward.

There were from two hundred and fifty to five hundred men working in the gang, and, after building out twenty miles to the Raccoon River, I left the business on a call west to my present home, Cheyenne, Wyoming, and took charge of a place made vacant by the illness of a man who had to travel for a year.

Years after that I was made a member of the board of directors, and later was advanced to the position of president of the Cheyenne and Northern Railroad, running one hundred odd miles northward from Cheyenne, which afterward became a branch of the Union Pacific.

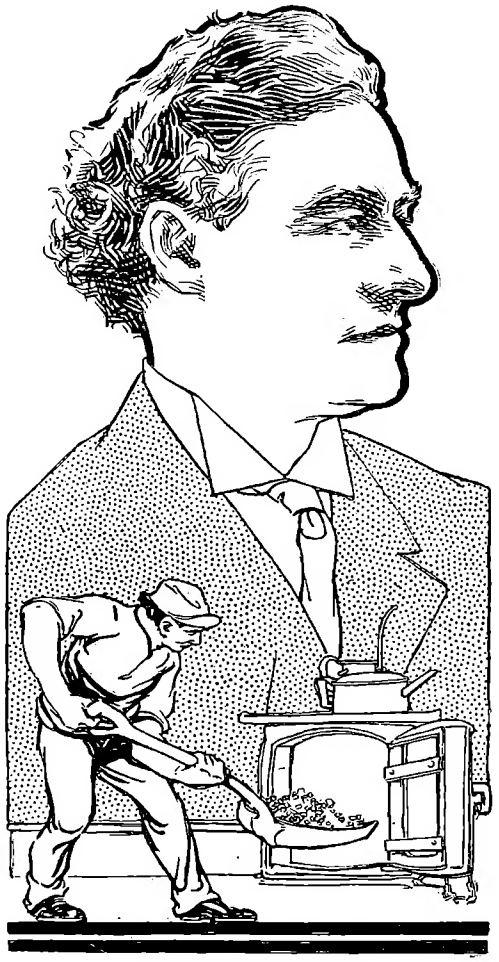
Railroading in those pioneer days afforded few comforts, but more unexpected compensations in the way of amusements than you find to-day, but I can truthfully say that I recall with pleasure the real happiness that we got out of the hardships.

SENATOR WARREN.

Drawn from a photograph.

I have an abiding belief that railroading is an excellent vocation for a wide-awake and ambitious American boy.

I consider any young man lucky to-day who is able to secure employment with a railroad.



CONGRESSMAN MARTIN.

Drawn from a photograph by G. V. Buck, Washington, D. C.

FACING DANGER AND DEATH.

By John A. Martin, Representative from Colorado.

I WAS born and brought up on the right-of-way. At home, I've got tucked away the overalls and jumper that constituted my uniform as a tallow-pot. I am the first member of the Brotherhood of Locomotive Firemen ever elected to Congress, and I am just as proud of my membership in the Brotherhood to-day as when I fired an engine.

Friends have frequently remarked to me, that if they had my railroad story to tell, they would never tire in telling it. My father was a railroad man, and I have two brothers who are locomotive engineers. For four years I worked for the Santa Fe, in Colorado, as a fireman, having been promoted to that position from engine-wiper. Prior to that time, I had had several years' experience in grading and track-laying, and, as a boy, helped to build the Colorado Midland, the first standard-gage railroad across the Rocky Mountains, in Colorado. Since I became a grown man, I worked a year on the section at $1.10 per day, but my railroad life terminated in 1894, as a result of the Pullman strike.

There is as much difference between riding on a locomotive and in a passenger-coach as there is between a saddle horse and an automobile. You never lose the sense of exhilaration caused by the motion of a good engine traveling at high speed. You feel the vibration, the throb, and the life of her.

I have also been in some accidents. The first, on the Colorado Midland, was a disastrous one. I was riding down the mountain on a work-train engine drawing two cars, on which were three hundred men.

Suddenly the track slipped off the dump, and I can still see the terrible scene. A half-dozen of the men were killed and fully twenty crippled for life. The engine was No. 13, and the accident occurred on a Friday, September 13.

As I got out of it in fairly good shape, although not exactly with a whole skin, I have since claimed that thirteen was my lucky number. I am not a bit superstitious about thirteen.

Everybody has read, more or less, about railroad accidents in which it was said the engine and trainmen had warnings or premonitions of impending disaster. I believe there is very little superstition in my make-up, and yet, for eighteen years, I have carried the firm conviction that I escaped death in a collision as the result of some such forewarning.

It was a winter night I had forebodings of danger before we started. I was firing a fast passenger-train which was several hours late. We were following an ore-train which had orders to run ahead of us until overtaken. We overtook her, backing in on a curve side-track with no flag out, plunging right into the middle of the freight-train at a speed of forty miles an hour.

Glimpsing out of the left cab-window, I saw a red light ahead of us, and, with a shout to the engineer, I sprang to the right gangway and out into the darkness.

Ninety-nine times out of a hundred, I would have looked out of the left gangway, which was on the inside of the curve, in order that I might see ahead, but as the result of my nervous condition, or whatever

you call it, I accurately apprehended the exact condition, and made the move that saved my life.

Had I even thrust my head out of the left gangway, I never would have drawn it back, as the engine struck on that side.

In making this trip, I relieved another man who confessed afterward that he laid off because of a like premonition. He said to me:

"When you climbed up in the cab to relieve me, I had a hunch that I was getting out of it and you into it."

I told him the same thing.

At that time, I was only firing extra and had been on this engine several trips. The last trip in, before the accident, the regular man reported. The run did not go out until about 9 P.M., arriving in Denver about 5 A.M.

When I went over to the roundhouse to clean the engine and get her ready for the trip, I scented danger ahead, and was relieved to see the regular man marked up for her.

Notwithstanding this, I continued more or less uneasy all day, and was sitting on my bed about 8.30 P.M., when the train which this engine would take out, whistled in. I nearly jumped with delight at the thought of not going out on her, but my relief was short-lived, for in about fifteen minutes the call-boy knocked at the door and said that the train was being held an hour, and that the regular man had decided to lay off.

The danger really was ahead of me all the time, which explains why I did not feel relieved even after the other fellow had reported. You can take it from me, not only as the result of my own experience, but from life-long association with railroad men, that many of them go knowingly into danger and death.

I know personally of cases where railroad men's wives have begged them not to go out when they, too, felt that they should not go. Yet they went, never to return alive.

HIS MODEST CHRONICLE.

By Benjamin F. Shively, United States Senator from Indiana.

MY railroad experience was really too short to chronicle. I worked only at the foundation, grading road-beds in St. Joseph County, Indiana.

I did this work to tide me over a rough place while studying and preparing to be a teacher; but my experience was too limited to consider myself these days in the light of a railroad man.

SENATOR LORIMER.

Drawn from a photograph by Monfort, Chicago.

HOW I STALLED A STRIKE.

By William Lorimer, United States Senator from Illinois.

THIRTY-NINE years ago I came to Chicago; and the first job I held in the line of railroading was on a street railroad. I began as conductor, and I want to say that it is the best school in the world for studying human nature.

You can learn more about people and their grievances on the end of a street-car than in any other way. In those days we had to work from sixteen to eighteen hours a day, and were paid one-half as much money as the men are now paid who work only twelve hours a day.

I was deeply interested in the social life of the railway orders, and organized the Street Railway Men's Benevolent Association.

Our association was really a union to look after the general welfare and to settle any disputes or difficulties that might arise between the members and the company.

We were a flamboyant lot of boys when any one of us was unjustly treated, and it took a lot of persuasion to establish peace in the club or to quiet the spirit of indignation over such a procedure on the part of the company.

At midnight I used to call at the association headquarters, and enjoyed talking over the news with the boys who had finished their run for the day. Our brotherhood was, in a way, what the union is to-day. The least excuse against the company was sufficient to enlist the sympathies of the agitators.

I recollect one member of the association who had been discharged because his accounts did not tally. The men were all up in arms to fight his battles, and determined to demand that the company reinstate him.

I also remembered a little experience that I had had with the same conductor. It is impossible, after having served in this capacity, to board a street-car and not watch the conductor collecting fares. It becomes second nature; and I also claim that it is utterly impossible to keep an exact accounting.

One may be as honest as he can, and still make mistakes by listening to a question asked, and in some way be interrupted so that he will forget to ring up the fare.

But the man who had been discharged, I had every reason to believe, was crooked. On more than one occasion I had detected him, but I had said nothing. However, when the question of our association became involved in a fight with the company as a consequence of his championship, I felt that it was time to interfere.

The boys were unanimous in their demands. If that conductor were not reinstated, then the whole lot of us were to walk out, on the principle of this injustice. The discharge did not rankle their honest hearts so much as the thought of a dishonorable discharge which had blacklisted his name.

All kinds of socialistic speeches had been made, and a majority of the members were so stirred that if a vote had been taken many families would have suffered in consequence.

I saw the trend of opinion. In the meantime, the discharged man was proud of the good-fellowship that the club showed toward his trouble, and unmindful of the suffering which would be meted out to them and theirs as a direct outcome of their loyalty to him. I think it was his selfish attitude that impelled me to act as I did.

Just when the feeling of bitterness was at its height I went up to this man and whispered:

"If you don't get up and ask these members to drop this question, and make a quiet appeal to their reason, you will force me to do so. If you do, I shall tell them why the association, as a body, should not exonerate you. I have watched your course for some time, and have done a little sleuthing on my own account."

He changed color, and in the course of the evening made the speech that I suggested. He told them he was going to leave town, anyhow, and that it would be folly for them to take up the fight to the extent of a strike, and more to that effect.

I am a railroad man, too. I build railroad tunnels. I have worked for the Milwaukee and St. Paul. I have just completed the rebuilding of a section of the Pennsylvania. I built the Illinois Central, the Great Western, the Chicago, Burlington and Quincy; and, in fact, there is nothing I cannot do in the construction line myself. I can truthfully state that I am proud of my railroad experience.

AN EARLY BUILDER.

By George C. Perkins, United States Senator from California.

I HAVE been mixed up with the transportation business pretty nearly a lifetime; but I have not been identified with the railroad end of it. Yet I had some experience in that line, too, when I built a railroad in California in 1872.

We built this short road of thirty miles or so to connect with the Pacific Coast Company's line of boats at Port Hartford, California. The extension began at San Luis Obispo, California. That was my first successful venture in railway building.

In the year 1860 I made a survey in California, from Oroville to Quincy, along the Feather River, but all my time was in vain. We were never able to finance the scheme, and it fell through, to be taken up later and built to connect with Denver. It is now known as the Western Pacific Company.

Nothing has interested me so much as transportation. I guess my love for it was the outcome of my boyhood, spent before the mast at seven dollars a month. At any rate, the life appealed to me, even in home ports, and I set about to make it a business. The railroad experience was but to further my interest in steamboat transportation.

AN OLD-TIME EXPRESS MESSENGER.

By Albert B. Cummins, United States Senator from Iowa.

JUST after leaving the academy I became a deputy surveyor, and, after a little time spent as a civil engineer, I became a victim of *wanderlust* and decided to go to Iowa, for the West called me.

There I had my first experience in railroading. I secured employment as an express messenger on the run between McGregor and St. Paul. I grew tired of the work, for our route lay through a sparsely settled country; and there was but little in the monotonous scenery to satisfy the imagination of a roving boy, so I resigned, and once again decided that I would make my fortune in the East.

I stopped in Indiana on my way back, and went to work as division engineer on the Cincinnati, Richmond and Fort Wayne Railroad in 1871. Afterward I was promoted to assistant chief engineer of the same road. At that time the road was in the course of construction.

In the beginning I knew but little about railway construction, but I believed that one's success in life depended upon making up one's mind to reach a certain goal and then going ahead.

A short time after, when the chief engineer was summoned to an important position with an Eastern system, his position was offered me. This was the first big problem I had to wrestle with; but I spent all that night studying the construction of a new bridge, just completed, that represented the general type of construction of the others yet to be built, and which was the only hard place on the line.

Then the chief gave me two days, which he devoted to practical lectures on curves, gradients, and bridge construction, after which I wrote a letter, saying that I would finish the road.

I did, and put it into operation in the limited time necessary to earn certain bonuses.

Then I built a road in Michigan, acting as assistant chief engineer. Within three years from the beginning of my railroad experience, I was offered the position of chief engineer of a road which has since then developed into the Santa Fe system; but I refused this offer, having determined to be a lawyer.

I have never regretted my railroad experience, and, while giving up but a little over three years to it, I have always valued the education and the association.

SENATOR CUMMINS.

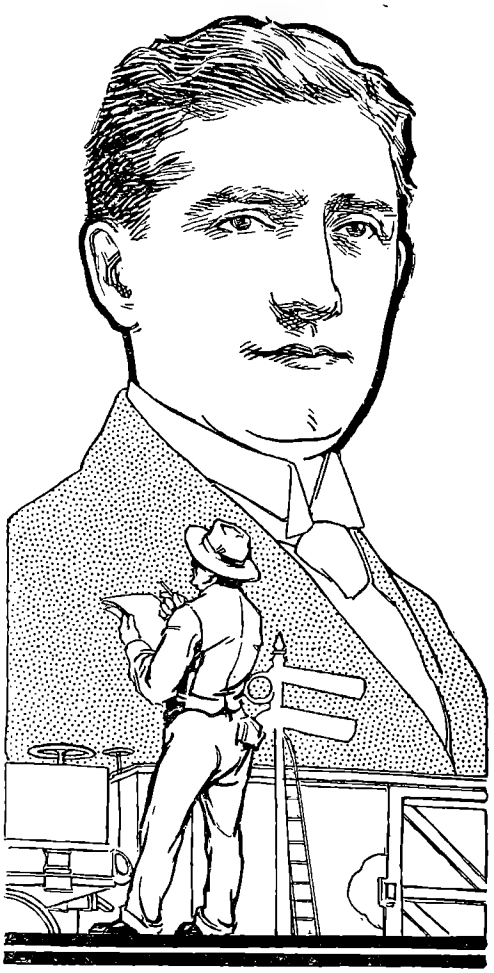
Drawn from a photograph by David B. Edmonston, Washington, D. C.

Twenty years after my experience as a messenger, while campaigning in Iowa, I met the old crew — engineer, fireman, and conductor—who were on my run in those early days. We had a pleasant hour in recalling old memories as we stood leaning against a lunch-counter at the eating station, swapping yarns of bygone years.

"I OWE IT TO RAILROADING."

By Carl C. Anderson, Representative from Ohio.

I WOULD rather have four years' education in railroading than the same number of years in a high school. I started as a yard clerk at Fremont, Ohio, when only



CONGRESSMAN ANDERSON.

Drawn from a photograph by Harris & Ewing, Washington, D. C.

thirteen years of age, and rose to bill-clerk of the Lake Shore road when I was fifteen. At seventeen, I was cashier of the Lake Erie and Western, and agent of the same road at nineteen.

Railroading is a good educational foundation for young men, and the only drawback seems to me that the service is only for the men who are young. However, the educational advantage is helpful to a man throughout his life, and the force and discipline of railroading surely equips a man for graduation from the "University of Hustle."

I was baggage-master at Fremont, on the Wheeling and Lake Erie, with ambitions to become superintendent, when I gave it up for commercial work. But to railroading, more than all else, I owe the foundation of what I have accomplished.

MY LONGEST HOUR.

By Arthur Phillips Murphy, Representative from Missouri.

I WAS just seventeen years old when I began railroading as a section-hand on the St. Louis and Frisco Railroad of Missouri. In the beginning my work was laying ties, putting new ties under the track, tamping them down, surfacing the track, laying rails, spiking them down, etc., and I did this for a year or so, carrying my nose-bag until I thought I had saved enough to stop and go to school in the daytime and study telegraphy at night.

I procured a position as night operator, and three or four years later was promoted to train-despatcher on the Frisco, and Texas and Santa Fe.

During my service as train-despatcher I studied law, and later resigned my position with the Santa Fe to finish my law course. I was admitted to the bar at Waynesville, Missouri, six months after severing my connection with the railroad.

Railroading is attractive work, and has a fascination all its own. The higher you get in the service the greater becomes your responsibilities.

I distinctly remember one very trying hour as train-despatcher—one that I shall not soon forget.

I made a meeting-point for two trains in the opposite direction, and gave a freight-train until a certain time to make a station. The operator disobeyed my orders, and let the trains out without delivering them.

After waiting sufficient time to hear from the operator, I called him on the wire and asked him where the passenger-train was.

He answered: "They're gone."

My hair began to raise. I pictured the disaster that would follow.

"What are you going to do about those two orders you have for them?" I next called.

I tried to raise him on the wire, but I could not.

He had closed his key and left the office, never to come back.

I at once ordered the wrecking outfit, without waiting to see whether they hit or not. Then I began to conjecture how many people had been killed. Fortunately, they did not strike, having sighted each other on the main track; but I had a most uncomfortable hour until I knew the truth. I can most emphatically state that it was the longest hour of my life.

RAILROADING IN A MINING-CAMP.

By George S. Nixon, United States Senator from Nevada.

MY railroad instruction began as a telegraph-operator at Newcastle, California, in February, 1880. I paid the station-agent twenty dollars a month for my board, and received nothing for my services, although I was on duty from five o'clock in the morning until midnight.

But I learned telegraphy and the railway and express business.

My parents chaffed me for my long hours without pay; but I replied: "I am not working for the agent; I am going to school and working for myself."

My parents spent six months coming from Arkansas to California in a "prairie schooner." At the end of their journey, with a few pieces of furniture and an ox, they started ranching on fifteen acres of land, which they planted in plums, peaches, and apples.

My first useful work, I remember, was in that orchard. Expert fruit-packers must have sensitive fingers, else they bruise everything they touch; and I first showed an aptitude for fruit-packing, and worked like a streak of chain lightning. But my usefulness did not end here, and this led to my acquaintance with the station-agent — and to my railroad career.

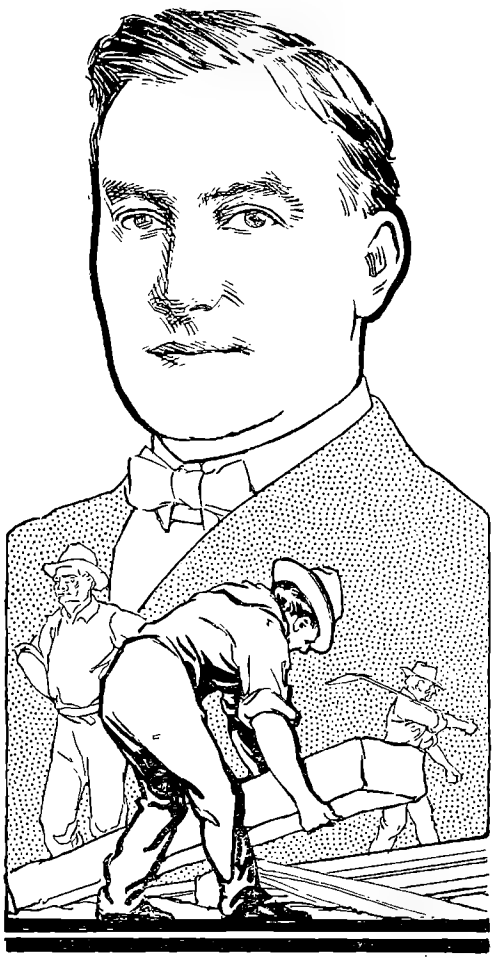
The birds ate our fruit, and father purchased an old shotgun, which he taught me to fire, with the reminder that I was not to shoot the birds while they were in the trees, and thereby do more harm to the fruit and foliage than the birds could do, but to shoot them on the wing.

I soon had a reputation as a wing shot which attracted the attention of the agent at Newcastle, who asked me to supply him with quail for the mining-camps at one dollar and fifty cents a dozen.

Some days I shot six dozen quail, but it was long and tiresome work from early dawn until late at night, often covering a forty-mile tramp to get my game.

My season began in the middle of October and lasted until late in the winter, and so, between quail-hunting and fruit-packing, there was little time to go to school.

I had saved four hundred dollars, and my station-agent friend advised me to learn telegraphy. I was delicate, having malaria, and was glad when, after fifteen months' apprenticeship as a telegrapher, I was sent over to the dry climate of Nevada and put to work at the station called Browns.



CONGRESSMAN MURPHY.

Drawn from a photograph.

This station, one of the most forlorn spots on earth, was located in the center of the "old forty-mile desert."

I was there just three months when I was transferred to Humboldt, a dinner-station, which somewhat relieved the lonesomeness.

I recollect the first telegram I sent from here, and have a copy of it to-day. The English style of signing the writer's name first was followed by the sender. It was dated—

OSCAR WILDE.

April 9, 1882.

MARIE JANSEN, GRAND HOTEL, SAN FRANCISCO:

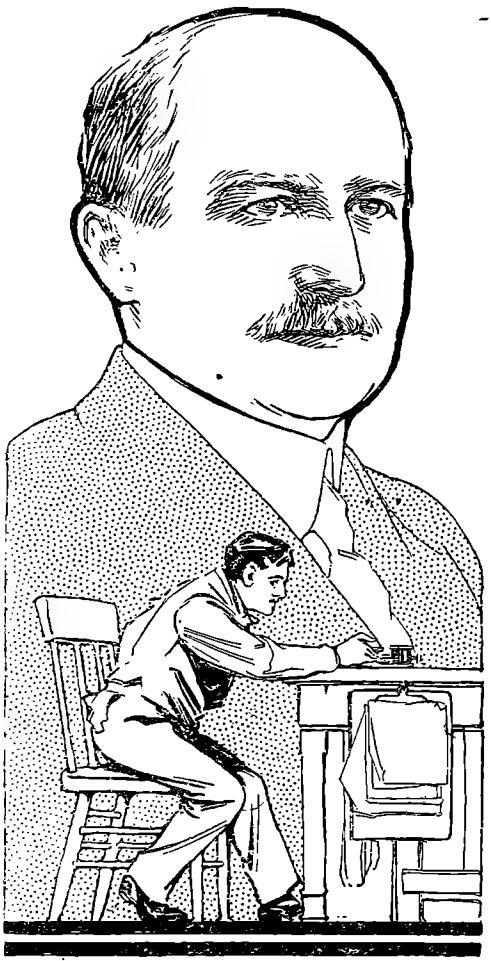
A dreadfully dull journey. Good-by. I have written.

I worked in Humboldt until 1883, and went down to the old Carson Bell Road. One night, about eleven o'clock, I was writing by

a student's lamp with a green shade which, to all appearances, darkened the room from the outside.

The blinds were down, and all was as quiet as a desert house can be, when I heard a rustle at the window.

I lowered my light still more, and waited for developments. Soon the rustling of the paper blind began again. There was a glass out of one of the window-panes which left an opening big enough for a slender body, and presently a man's foot was visible.



SENATOR NIXON.

Drawn from a photograph copyrighted by Harris & Ewing, Washington, D. C.

There was about twenty-five thousand dollars in silver bullion in the safe, and I knew it was up to me to guard it. The robber was at a great disadvantage, thinking I had gone up-stairs to bed and that he had everything to himself.

I stood for a minute wondering if I should grab my Wells-Fargo shotgun and fire, or scare him off. I decided on the latter course.

The intruder's leg was inside the window. I crept up and gave it a dreadful wrench. There was a screech. Never in my life have I seen quicker action than that man demonstrated. Before I could raise the shade, he was scurrying across the sand-hills.

I aimed over his head and fired, just to remind him that I was on the job if he ever contemplated a future call; but I was not bothered by him again.

I was transferred to Bellville, a mining-camp with a population of five hundred. This was a pretty wide-open town, and there were no officers. Each man was a law unto himself.

I had been here just a week when a chap came into the office and asked for an express package addressed to him.

"Yes, here it is," I said, and threw the package before the little window where the stranger stood leaning on his elbows.

I turned to get the bill, for the package was sent "Collect," and handed him the book to sign. This he did, and started for the door without paying me seven dollars and fifty cents, the amount of the bill.

"You haven't paid for this!" I cried.

He stopped for a minute, looked at me over his shoulder, and said:

"Look here, sonny, take your medicine like a man. It's up to you to understand your own way of doing business, but in these here parts I think it would be better for you to collect your money before you give up the goods."

He was gone before I had a chance to think of my Wells-Fargo gun. I could see the force of his argument. I must make good the amount, and I resolved to profit by my lesson.

It was noon; I closed the office and went into the restaurant for my dinner in a very unpleasant frame of mind. There I met the secretary of the mining company, who had just organized a gun club for the amusement of shooting glass balls shot up from a trap.

He asked me to go into the field to see the sport, and, having an hour to spare, I agreed.

To my surprise, I found the stranger who had just cheated me one of the most enthusiastic members of this club. I looked him over without comment; and when I was asked to shoot five balls, I accepted the invitation.

My quail-hunting served me in good stead, and I hit every ball.

Then the stranger said: "I'll bet you ten dollars that you can't hit another five in succession."

"I won't bet with you," I answered; "but I can break the balls."

After some persistence on his part, I agreed to bet with him, provided that if he lost the money should go to the club.

I broke the balls, and he looked his admiration and was game.

"I'll bet you twenty that you can't break ten in succession."

He lost again.

"Now," said I, "I'll bet you thirty that I can hit thirty balls. I'll leave my gun on the ground, uncocked, and you may throw five balls up at a time, and I promise you to reach for my gun, cock it, and smash the five before they hit the earth."

He put up his money, and the club won that bet also.

After that fun, I went back to the office with the information that the stranger was a tin-horn gambler and had always boasted of his prowess with the gun. To gain a point, I had gone through my shooting stunts with all of the antics of long-practised skill to make him lose his money to the club.

Two weeks later the gambler came into the office and said:

"Well, sonny, I guess it is about time to get another package. I guess there's another about due to-day, eh?"

I looked over the packages, and told him he was right. He handed me a twenty-dollar bill. I took the money, found the old bill, and handed him five dollars change.

"You've short-changed me!" he began, ripping out a volley of sage-brush oaths.

My hand was on the Wells-Fargo gun, and I raised it. My! how he did get out of that station. I chuckled to myself after he was out of sight on his way to the hotel, and was more than surprised to see him returning half an hour later.

He had changed his clothes, and was wearing a tight-fitting pair of Mexican trousers and a thin shirt that wrapped his slim body without a wrinkle.

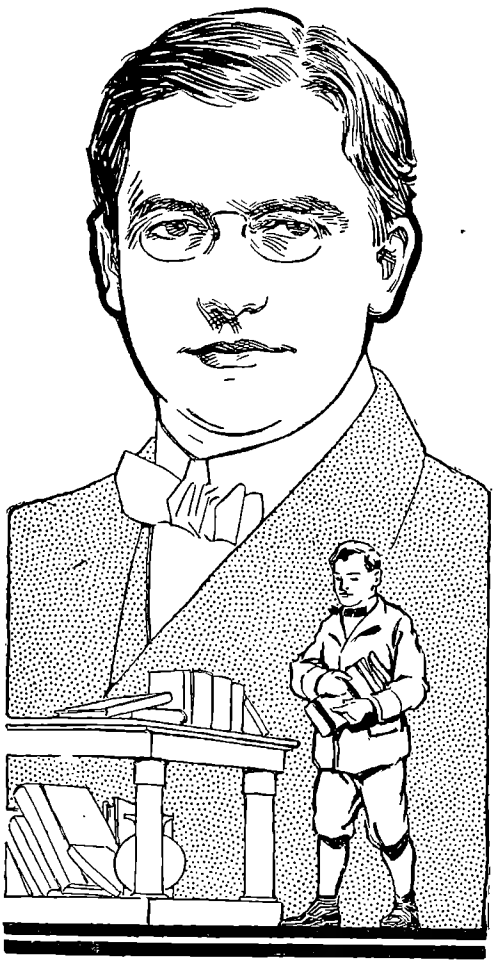
I cocked the gun and was waiting for him. As he came nearer I could see that he was unarmed, and had dressed himself in that attire to show me I had nothing to fear.

He paused outside the station, and called me to come out and hear what he thought of me. He put his hands up over his head and asked me to search him if I thought it necessary after looking at his scanty wardrobe.

I could see that he was sincere. He grabbed me by the hand, and swore his admiration for a kid who could get what belonged to him in his own way.

"I knew it was in you, all right, and was just trying you out, old man."

After that little altercation, that man became one of the best friends I ever had. The friendship has lasted all of these years.



CONGRESSMAN CASSIDY.

Drawn from a photograph by Newman Studio, Cleveland, Ohio.

A 36-HOUR STRETCH.

By James H. Cassidy, Representative from Ohio.

IF years devoted to the office side of the business fits a man to enjoy the appellation of railroader, then I think I deserve some consideration. I served an apprenticeship of fourteen years, beginning as office-boy on the L. S. and M. S., at Cleveland, Ohio.

I remained in the claims department during

that period. I spent my evenings while in this office studying and at night-school, and concluded to become a lawyer. My hours in the office made it easy for me to study.

I remained with the company until I was admitted to the bar, then I resigned to practise law. I had no strenuous or exciting experiences, as the office end of it does not furnish material of that kind; but I do remember a siege of long hours that once fell to my lot on the occasion of a wreck with a fast freight-train at Zanesville, Ohio.

CONGRESSMAN NORRIS.

Drawn from a photograph

I was sent out to take charge of the stock of freight, which had to be sorted and sent along on its way, or else replaced with new stock. I worked for thirty-six hours without stopping. Food was brought to me from time to time, and I managed to keep awake until the track was cleared.

ON THE "FLOATING GANG."

By George W. Norris, Representative from Nebraska.

MY experience as a railroad man has not been extensive. I was only employed as a section-hand, but I have often wondered if I would not have reaped a better reward if I had remained at that vocation and worked my way up.

I worked as a section-hand on the Wabash Railroad, in 1880, for a period of three months, in what is known as the "floating gang."

I had been studying at the State Normal School at Valparaiso, Indiana, to prepare myself as a teacher. When the school closed, I had no money to pay for my fare to Toledo, Ohio, where I had been promised a place on the following term.

I had been boarding myself in a cheap, haphazard way known only to students who fight their battles for a coveted education.

I had a small grip-sack for my clothing, and concluded the best way I could reach Toledo to pass my examination was to beat the railroads.

I started on a freight at night. I crawled into an empty car, but by some bad luck I was discovered and put off. However, I managed to hide on the same train before it pulled out, which was easy to do at night, but my luck again deserted me.

This time, I saw the little red caboose disappear in the distance while I trudged wearily along the track until I boarded another freight bound eastward.

Dead-beating is not as easy to accomplish as some people claim, and I was ignominiously "fired" from three different freight-trains before I succeeded in reaching my destination.

When I arrived there, I passed the examination all right, but three months must pass before my school would begin, and I was broke.

Then it was that I applied for work in the "floating gang," whose work consisted chiefly in tamping up tracks and putting in new steel.

In my judgment, there was then, and always has been, an opportunity in railroad service for advancement to good positions by commencing in the section, provided that the applicant has sufficient education to perform the duties of higher positions.

The railroad man who comes up this way learns minute details that are of great value to an official.

RUNNING A BLAZER ON HAGAN.

BY ROBERT FULKERSON HOFFMAN.

A Sorry Attempt at Backbiting, in Which the Biter Got Badly Bitten.

"I AM fully acquainted with Mr. Snively's ability and with his overzealousness."

That was the saving clause in a letter which the general manager wrote to the general superintendent, and which that officer in turn forwarded to Masters, the signal engineer. It should have saved Snively, but it did not. He was not big enough to properly assimilate it.

However, the letter, in total, had the effect of saving his job for the time being, as Masters had frankly recommended his removal to some other sphere of usefulness. In fulfilment of what he saw as his duty, he called in Snively from the line, and laid the letter before him without comment.

Masters really did this from sheer goodness of heart, and just there is where Snively's salvation from himself should have resulted. Instead, a dull flush of mortification and anger dyed his angular face an ugly red, and he walked out of the office after tossing

WALKED OUT OF THE OFFICE AFTER TOSSING THE LETTER BACK UPON HIS SUPERIOR'S DESK.

the letter back upon his superior's desk without so much as a "Thank you."

That performance alone would have won for him an instant discharge if Masters had held an entirely free hand in the matter, but the lamentable fact is that Masters was not thus free. There were reasons, chief of which was that Snively was the son of a professor in a pine-stump college, and the professor, long years ago, had been the able teacher of the present general manager. The general manager, in turn, felt that he was paying an unwritten obligation by trying, in every legitimate way, to teach the younger Snively the science of railroading. He intended only that Snively should have his chance, fairly and fully, it is true, but he did not yet understand, as did Masters, that Snively was a failure before he ever enlisted in the service.

So, Snively's little bluff of tossing the letter back disdainfully worked, apparently, with Masters, and the youngster flounced into the drafting-room and took his place at his drawing-board.

He was a scrawny little runt. He could not help that. Three generations of escape from the wholesome physical stimulus of the anvil and the plow had dwarfed his body and sharpened his wits more than "goff," on one hand, and bulldog pipes filled with over-scented tobacco, on the other, could counteract in one generation.

Filled with the petty prejudices of school and campus, he was now being badly upset by the stirring, practical applications of the hurrying life about him. Just now, he was bitterly detesting, with a hatred his eyes had made no attempt to conceal, the men whom he had learned glibly to classify as "muckers," chief of these being Masters, upon whom, he mentally assured himself, he had just run a beautiful blazer.

With that his self-esteem again took the ascendant. He thrashed over in his mind the wording of the general manager's letter, while he savagely jammed down the thumb-tacks in preparation for a drawing that had been assigned him. By the time he had the work well laid out he had reached the satisfying conclusion that the word overzealousness was a stenographer's error which had escaped the notice of the writer at signing, and the reference to his ability fell like a healing dew upon his wounded sensibilities.

Therefore, he straightened his small height importantly before his drafting-table, rolled his shirt-sleeves higher upon his golf-browned arms of pitiful meagerness, hitched his small trousers higher by the belt, and glared quite disdainfully round at the backs of those who labored at the tables about him.

Meanwhile, Masters, returning the letter to the general superintendent, just across the hallway, was saying in conclusion of a very serious-faced conversation:

"Oh, yes. He's smart as the rest of them —but he's little. *Little* beyond helping."

"Well," said the general superintendent dubiously, "give him another chance, and keep a tight rein on him.

"Put him out with Graves on some of that surprise test work. Graves can hold him level. Maybe there is something worth while in him. If there is, I'd like to find it, for the old man's sake—and so would you."

"Yes," said Masters, quite heartily.

And that, with the best intentions in the world, is the way the situation finally culminated in a crisis for Hagan, very soon afterward.

Half an hour after the conference in the general superintendent's office, the signal engineer's office-boy laid a folded note, still damp from the letter-press, upon Snively's drawing-board, and was turning away without comment, when Snively halted him harshly.

"Here! What's this?" said he.

"Don' know," said the boy. "Mr. Masters said copy it in the letter-book, and you bet I copied it!"

Properly addressed and dated, the plain and brief instruction read:

> Train No. 5 will drop you off at Babbler. Meet Mr. Graves there to-night and work, subject to his orders, on surprise signal tests, until recalled.

Now, be it known that these surprise tests, the setting of false signals surreptitiously against engineers and firemen, at unexpected times and untoward places, had been the subject of much acrimonious discussion before its adoption. But, spirited as that official discussion had been, it was nothing as compared with the bitter denunciation which the practise had brought out among the train-crews since its inauguration, and the resulting discipline which had been applied from time to time as the result of its disclosures.

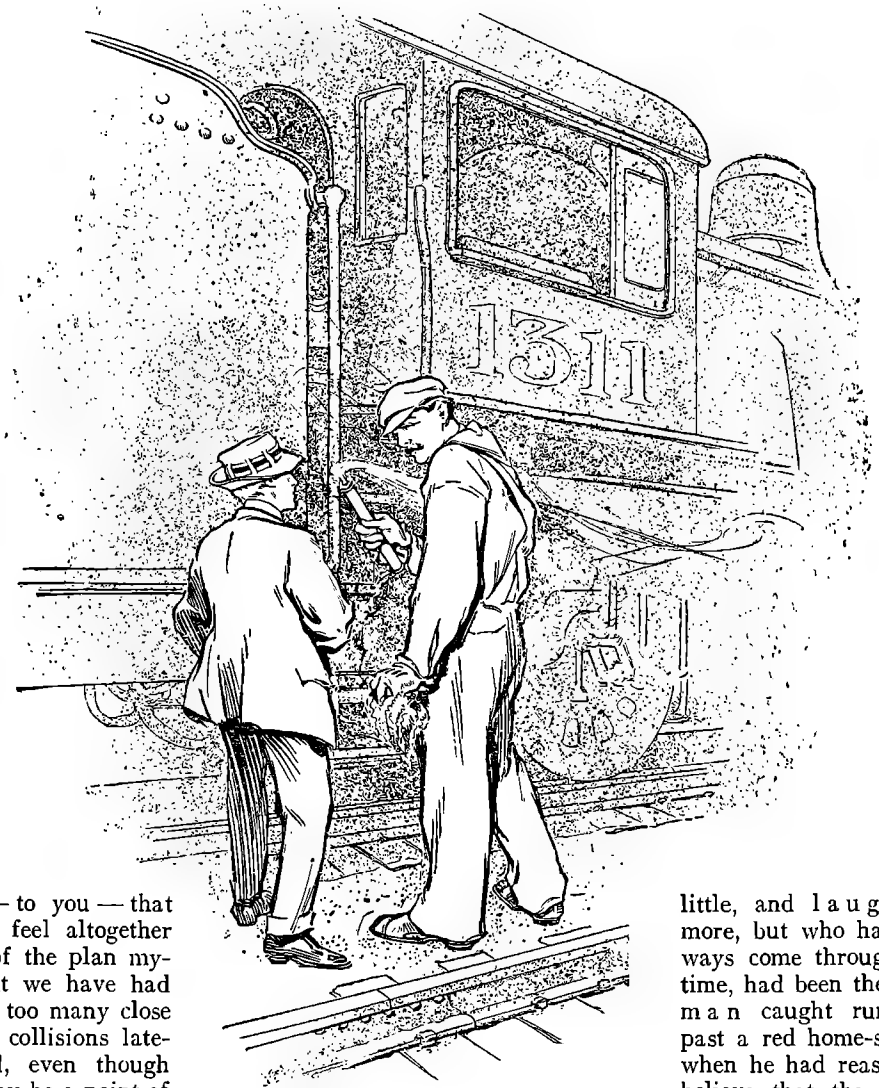
"It is too much like a low-down conspiracy," the general superintendent had said in the beginning of its consideration.

"It is tempting a man to steal when he is hungry! Hungry for time on his schedule, and a man who is not carrying that kind of appetite is no good on an engine. He's got to eat up every minute on the face of his

watch, or he is no good to us, and it don't seem fair to lay out behind a rock and hand him that kind of loaded bun when he's doing his busy best to make time honestly."

"That is all very good on the face of it," the general manager had replied. "I will admit — to you — that I don't feel altogether proud of the plan myself, but we have had entirely too many close calls to collisions lately; and, even though there may be a point of unwritten law, that where you conspire to have a man commit an offense you become equally guilty, I want this thing tried out for a while. At least, until we get some idea of what is really to be expected."

That, of course, had closed the discussion as far as officialdom was concerned, and the hateful and hated spy-system of signaling had immediately gone into effect.



IF I EVER CATCH YOU MONKEYING A SEMAPHORE LIGHT AGAINST ME, YOU'LL GET ABOUT SIX MONTHS UNDER WATER."

Jim Hagan, big, rough-spoken, capable Jim, with his bone-stirring laugh and steady nerve and clear judgment, that had carried the mail through on time against almost inhuman odds on more than one occasion; Hagan, who had growled some, and swore a little, and laughed more, but who had always come through on time, had been the first man caught running past a red home-signal when he had reason to believe that the block would clear before he struck trouble.

The block had cleared safely enough, but somebody had lain behind the bank of a near-by cut and made the first serious dent in Hagan's spotless record of six years of banner engine-running.

Hagan was indignant, disgusted, eloquent, fighting mad, by turns, after the record was posted and the punishment applied, but it

"THAT'S ONE OF THE MOST DANGEROUS RUFFIANS ON THAT ENGINE I VE EVER SEEN."

all availed nothing for him. He had to take his medicine. His clean record was gone. After that, he never ran by a red light of a horizontal semaphore-arm, no matter how good the chances seemed, and that was as it should have been.

But, from the night on which he was caught stealing, he never saw a man climb a signal-mast or paint a switch-target without making uncomplimentary remarks about his antecedents and his probable eternal welfare. Hagan was mad, in short, deep down and all the way through.

Therefore, when young Snively sauntered up alongside of Hagan's engine on the evening that he received orders to meet Graves at Babbler, Hagan lowered his head and charged around the point of the pilot with the manner of a man who is forcibly tearing himself away from his dearest vice. He wanted to thrash, spank, Snively on sight, and of course he knew that would not do. So he fled to the farther side of the engine, and Snively made the mistake of following him up.

Snively was blissfully unaware of the smoldering fires of wrath which the signal-department's spy system had kindled. He had fixed ideas about holding hard for ideals, and saw nothing very stirring about trapping a proud old veteran as Hagan had been trapped, or in putting the resultant smirch upon a veteran record. In fact, the job was just about up to Snively's measure.

He liked it, and was so free of all question of shame in the premises that he did not in the least understand that Hagan and every other engineer on the line knew every man in the signaling department, and hated them all so far as they could see them.

He followed Hagan around the pilot quite confidently, therefore, somewhat patronizingly, it must be confessed, and when the engineer could find no further excuse for prodding over and between the engine-frames with torch and oiler, he turned and faced him savagely.

"I'll ride out to Babbler on the engine with you to-night," said Snively, handing out a card-pass for Hagan's inspection. "Guess I will take a look at the signals going out."

"Maybe you will," replied Hagan, depositing torch and oiler on the broad top of the guides.

He examined the pass carefully, as though hoping to find a defect. Finding none after a careful search of both sides of the card, he returned it jerkily, and said:

"Well, I guess you'll have to get aboard! So you're smelling around after signals, eh? Um-huh. Well, mebbe we can show you some between here and Babbler, but they'll be moving some!"

He picked up his torch and tools, with that, and started toward the engine-step at the gangway, while Snively trailed in silence at the rear.

Then, just when he had raised his foot to mount to the cab, Hagan had a vision of that one dark blot recently fallen upon his railroad escutcheon. His foot dropped with a thud to the ground, and he turned upon Snively with the sort of smile that those who knew Hagan best never liked to see.

"Climb up, Bub," said he, stepping aside with a wide flourish of his torch in the sur-

rounding blackness. "And, while you are climbing, let me tell you this:

"If I ever catch you monkeying a semaphore light against me, you'll get about six months under water, if there's a borrow-pit handy! And to stand committed until complied with," he added, with a slight tightening of the smile.

"That's no threat, son, you can tell your parents," he continued in the same counterfeit of good-humor when they had mounted to the cab.

"Just a fair promise that your services will be recognized and rewarded, if I can help you out of the bushes any."

What Snively said is of very little consequence.

In fact, he had no clear recollection immediately afterward of having said anything. The whole thing was, to him, so incomprehensible, so utterly treasonable and absurd that he did not get the sting of it fairly fixed in his mind until Hagan had whirled the west-bound mail over its prescribed course, and, upon its particular minute, had dropped him on the little platform at Babbler.

Then, as he stood in the yellow glow that fell from the bay window of the telegraph-office and watched the triangle of red tail-lights following the roar of Hagan's receding engine farther and farther into the lonesome night, the sting of the affront that had been put upon him began to rankle in his small mind, and he soon gave the proof of the littleness that Masters had discovered by plotting a cheap sort of revenge upon Hagan.

"'Bub! Borrow-pit! Six months!' Why, the fellow had talked to him as though he were an immature tramp!"

He astonished the operator by entering a sudden interruption into the wire report of the passage of the mail:

"Say! That's one of the most dangerous ruffians on that engine I've ever seen!"

"Who?" queried the operator, in mild surprise, when he had finished his report to the despatcher.

"Who, Hagan? Oh, Hagan's all right. Guess you never saw very many, did you?" hazarded the operator good-naturedly. He was hauling out a pipe in great unconcern. The mail, west, was safely through his bailiwick once more, which seemed to him to be the main issue of present importance.

"Well, he'd better be," replied Snively evasively. "When does he come back?"

"Makes a turn-around at Kansas City, and comes through here again at midnight, on the mail, east. Why?"

"Oh, nothing special. Has Mr. Graves been here to-day?"

"Kansas City," replied the operator briefly.

"Oh, no!" replied Snively with an air of superior knowledge. "I was to meet him here to-night."

"You will, if you wait until Hagan comes east with the mail."

"How do you know I will?" demanded Snively.

"Read it on the side of a box car," replied the operator shortly, turning to the papers that littered his desk.

His good-humor had yielded and vanished before the persistent churlishness of Snively. The sullen roar of the water among the piers of the bridge over Big Babbler drifted in through the open windows, and emphasized the silence that followed the operator's last announcement.

Snively stood for a moment longer looking in through the window upon the operator, who paid him no further attention. In the drear loneliness of the isolated station and the hostile atmosphere that he had created, the world seemed suddenly grown a very cold and soulless place. He was aching with a sense of self-pity and unreasonable wrong.

Turning, then, from the window, he walked the short length of the platform, and stood in the darkness at its end, looking away to where the recently installed distant signal brightly showed the beginning of the Babbler block. Nearer, the home-signal sent up its mast into the night, and both, he knew, were blazoning forth their silent messages to the line that the block was clear and all was well.

Likewise, he scanned the signals, home and distant, upon the paralleling double track; then, definitely, his half-matured plan to run a blazer on Hagan was formed. Why wait for the arrival of Mr. Graves? He knew the process, quite as well as Graves did: how to manipulate the magnets, drop the disk to show red on the home-signal after Hagan had passed the distant at clear, and then restore the clear of the home-signal when Hagan stopped, or failed to stop.

Capital! Hagan had to stop, anyway, to drop Graves. No reason why he should not be tried out on a stop short of the station, and let the record be turned in by Graves with the other reports.

Yes, Snively knew the process, but what he did not know was that, for reasons sufficient to the operating department, Hagan would return that night upon the left-hand track, instead of the right, and that upon the

parallel right-hand track a heavy freight was even then bowling toward him through the darkness from the same direction.

Had he known those things, he would also have known that Hagan, with his fast mail, would be running the freight a close race when, later, they arrived at the Babbler block, but he kept widely clear of the obnoxious operator, and loitered out to the river and back before making his preparations near the home-signal mast.

When, finally, he heard the distant sound of an engine whistle, and saw the faint upward glow of a headlight hidden among the bluffs, he established himself behind a high barricade of cord-wood that stood on the apex of the curve between the tracks and the water-filled borrow-pits which had earlier contributed to the filled approach to the bridge.

Presently, the full glare of a headlight broke clear in the last notch of the bluffs across the river, and the bright shaft of light came driving and blinking through the slant of the bridge over the Big Babbler.

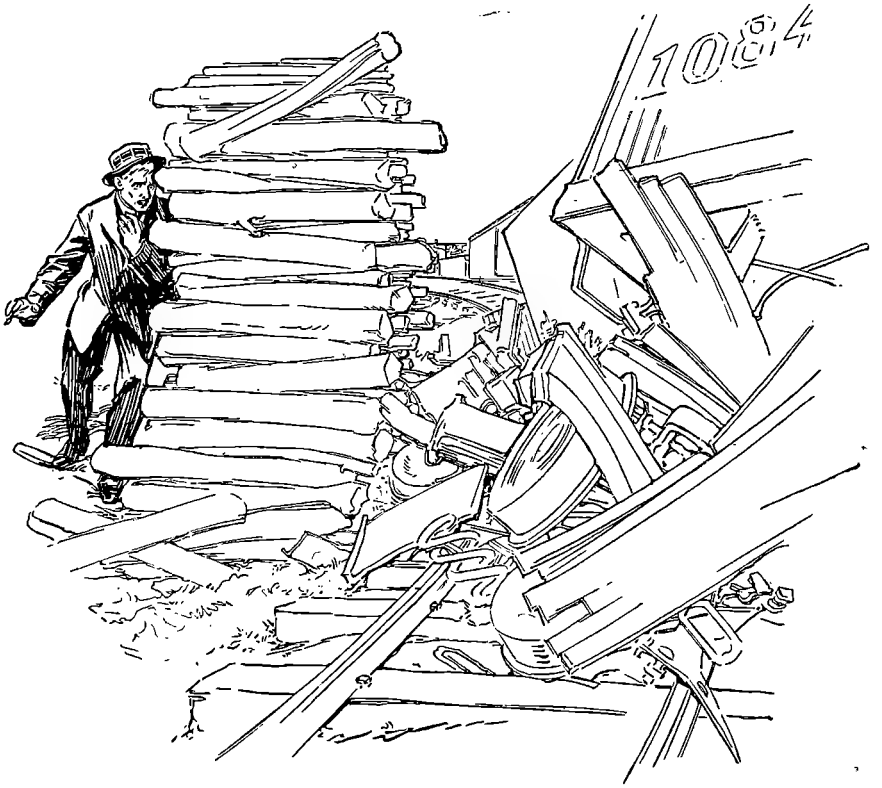
Close up behind it in the cab was Dave Tate, with the recollection of a clear distant signal just passed, and with the home-signal showing high and clear before him when his engine shot out of the end of the bridge. Following the engine were fifteen cars of light freight fitted with air-brakes, and back of them, rolling rapidly, were twelve cars of heavy dead freight—non-air.

It was a bad make-up, but Dave took them as he got them. With a final look at the clear home-signal, he opened out fully as he cleared the bridge, and the engine responded with a rising, stammering roar from the stack. Then the home-signal suddenly went red.

Dave's hand dropped the throttle shut at a single shove, and fell swiftly upon the brake-valve, with no time for thought of air or non-air. The brakes crashed home upon the fifteen forward cars, and the twelve free loads behind them lunged forward against them and hunched and crowded and groaned in their interrupted flight.

The dark, crowding line stood the frightful strain until Tate and his engine with nearly half of the train had been crowded, bucked, pounded past the home-signal mast, with its light again turned suddenly to clear.

Then the three light box cars at the middle of the train were suddenly lifted and cata-



TOWERED HIGHER THAN THE CORD-WOOD BEHIND WHICH SNIVELY HAD SECRETED HIMSELF.

pulted into the air. They fell, a splintered and cluttered mass, upon the opposite track, and mounted to a ragged pyramid of broken timbers and twisted trucks that towered higher than the cord-wood behind which Snively had secreted himself.

While the ruin was grinding its way into final silence, a second bright, swifter, gleam had been racing toward it among the bluffs across the river.

No friendly bar of steel or vagrant truck in all the ruin had so fallen as to set the distant signal of the parallel track to warning position. Hagan, with the mail, shot past the distant, saw the home at clear, saw the tail-lights of the freight all safe and intact upon the opposite track, and he swept through the bridge and dashed into the wreck with only a futile movement of his left hand.

He had not a chance. The time was too short and the curve too sharp. His engine plowed into the clutter of freight-cars, writhed for an instant among them, and then leaped, with a sharp crash of steam escaping from broken pipes, into the crest of it all.

She toppled and hung and glided outward across the curve for a single instant, and then engine, crew, and the mail-cars dashed down with a grinding roar among the flying cord-wood. The borrow-pits sent up a yellow wash of waters and took the mail into their depths.

That night and the following day, the clay-pits held their secrets grudgingly. On the second night of fierce laboring, they began to give them up under the pitiless search of the wrecking-cranes.

Hagan came first. Then they bore his fireman away and laid him on the little station platform, beside Hagan.

"Well! That's all, I guess," said the wrecking foreman.

He surreptitiously smeared a vagrant tear or two across his browned cheeks with the back of his hand while he sloshed carefully back and forth in hip-boots upon the cord-wood, which was beaten into the bottom of the pits like a crude floor.

"No," said the night operator quite positively. "There is one more."

He had been quietly comparing notes with Tate, who had been doing sleepless duty on the engine of the wreck-train.

"How do you make that out?" challenged the wreck-master, instantly all business again, with not a trace of sentiment.

"I found this on the edge of the clay-pit last night," replied the operator, "and unless the fellow that owned it is running yet, he's here!"

He drew from his pocket and held upon his open palm a dainty bit of a brier pipe with a slender, curving stem of amber.

"There was a young fellow smoked that pipe at my window, a while before this thing started. He went away and didn't come back. Tate, here, says the home-signal went from clear to red and back to clear, all after his engine came out of the bridge."

"What do you say, Dave?"

"That's what I say!" replied Tate, with not a trace of venom.

"Somebody monkeyed the home-signal! Where is he?"

The strange floor of the pits came up, stick by stick. Finally, there came with it the pitiful last of Snively's running of a blazer on Hagan.

His offense was great and his conception of things was very small, but, somehow, when the veterans had laid him beside Hagan and the fireman, and looked down upon his poor, bedraggled little shape, they found no room in their hearts for bitterness—only pity.

BILL NYE'S RAILWAY PASS.

A Melancholy Missive Written by the Great Humorist when He Returned the Precious Pasteboard to the Genial Giver.

(From an Old Scrap Book.)

HUDSON, WIS., March 20, 1887.

W. F. WHITE, ESQ., GENERAL AGENT, ATCHISON, TOPEKA, AND SANTA FE RAILROAD, TOPEKA, KANSAS:

DEAR SIR—I enclose herewith annual pass No. Q 035, for self and family over your justly celebrated road for the year 1887.

I also return your photograph and letters you have written me during the past five years. Will you kindly return mine?

And so this brief and beautiful experience is to end and each of us must go his own way hereafter.

Alas!

To you this may be easy, but it brings a pang to

my heart which your gentle letter of the 1st inst. cannot wholly alleviate.

Whenever hereafter you look upon this tear-speckled pass will you not think of me? Remember that you have cast me from you, and that I am wandering across the bleak and wind-swept plains sadly enumerating the ties on my way to eternity.

I do not say this to reproach you, for I fear that you care for another, and so we could not be happy again together.

But, oh! do you pause to fully comprehend the pang it costs me to return this pleasant-faced little pass with its conditions on the back? Could you see me even now, as I write these lines, turning away ever and anon, laying aside my trembling pen to go and sit by the grate and shudder and weep and put out the fire with my bitter tears, your heart would soften and you would say:

"Return, O wanderer, return."

You do not say in your letter that I have been false to you or that I have ever grown cold. You do not charge me with infidelity or failure to provide. You simply say that it would be better for each to go his several ways, forgetting that my several ways are passing away, passing away.

It is well enough for you to talk about going your several ways. You have every facility for doing so, but with me it is different. Several years ago a large Northwestern cyclone and myself tried to pass each other on the same track. When the wrecking-crew found me, I was in the crotch of a butternut-tree, with a broken leg. Since that time I have walked with great difficulty, and to go my several ways has been a very serious matter with me.

But I do not want you to think that I am murmuring. I accept my doom calmly, yet with a slight tinge of unavailing regret.

Sometimes, perhaps in the middle of the dark and angry night, when the cold blasts wail through the telegraph wires and the crushing sleet rushes with wild and impetuous fury against the windows of your special car, as you lie warmly ensconced in your voluptuous berth and hear the pitiless winds with hoarse and croupy moans chase each other around the Kansas haystacks, or shriek wildly away as they light out for their cheerless home in the Bad Lands, will you not think of me as I grope on blindly through the keen and pitiless blasts, stumbling over cattle-guards, falling into culverts, and beating out my rare young brains against your rough right-of-way; will you not think of me? I do not ask much of you, but I do ask this as we separate forever.

As you whiz by me do not treat me with contumely, or throw crackers at me when I have turned out to let your haughty old train go by. I have always spoken of you in the highest terms, and I hope you will do the same by me. Life is short at the best, and it is especially so for those who have to walk. Walking has already shortened my life a great deal, and I wouldn't be surprised if the exposure and bunions of the year 1887 carried me off, leaving a gap in American literature that will look like a new cellar.

Should any one of your engineers or trackmen find me frozen in a cut next winter, when the grass gets short and the nights get long, will you kindly ask them to report the brand to your auditor and instruct him to allow my family what he thinks would be right?

I hate to write to you in this dejected manner, but you can not understand how heavy my heart is to-day as I pen these lines.

I wish you and your beautiful road unmitigated success. It is a good road, for I have passed over it and enjoyed it. How different the country will look to me as I go bounding from tie to tie, slowly repeating to myself the trite remark once made by the Governor of North Carolina to the executive of South Carolina.

I hope you may never know what it is to pull into the quaint little city of La Junta with the dust of many a mile upon you and the thirst of a long, uneventful journey in your throat.

I hope that Congress will not pass a law next year which will make it a felony for a railroad man to say "Gosh!" without a permit. I hope that your life will be chockful of hurrah and halleluiah, even if mine should be always bleak and joyless.

Can I do your road any good, either at home or abroad? Can I be of service to you over your right-of-way, by collecting nuts, bolts, old iron, or other bric-à-brac?

I would be glad to influence immigration or pull weeds between the tracks if you would be willing to regard me as an employee.

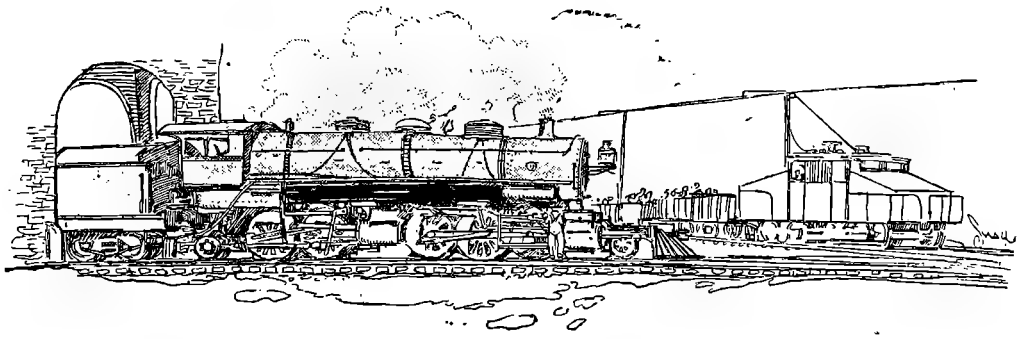
I will now take a last look at the fair, young features of your pass before sealing this letter. How sad to see an annual pass cut down in life's young morning, ere one-fourth of its race has been run. How touching to part from it forever. What a sad year this has been so far. Earthquakes, fires, storms, railway disasters, and death in every form have visited our country, and now, like the biting blasts from Siberia, or the nipping frosts from Manitoba, comes the Congressional cut-worm, cutting off the early crop of flowering annuals just as they had budded to bloom into beauty and usefulness.

I will now close this sad letter to go over into the vacant lot, behind the high board fence, where I can sob in an unfettered way without shaking the glass out of my casement.

Yours, with a crockful of unshed tears on hand,

BILL NYE.

Da boss he cursa da rails, da ties, da ballast, an' da dago. He say all rotten. Still da trains not get wrecked. Guess da boss earna his mon working, not talking. Me too.—Soliloquy of a Section Hand.



Locomotives While You Wait.

BY ARNO DOSCH.

FILLING rush orders for locomotives is a problem with gigantic proportions that staggers the minds of those not acquainted with the workings of a huge locomotive plant and unfamiliar with the herculean undertakings evolved there. To the average person, whether the output of such a works is one locomotive a day or only one a month is very much a matter of guesswork, but when a firm like the American Locomotive Works can turn out four engines every day in the week, it helps to clear any existing uncertainty.

Four locomotives a day, 120 a month, 1,440 a year—Atlantic or Pacific type passenger-engines as you choose. Moguls, Prairies, and even a Mallet, with often less than thirty days elapsing in their evolution from mere billets of steel to proud, speed-burning locomotives!

How do they do it? Mr. Dosch, who has been delving into the mysteries of the great locomotive works, describes the manner in which the work is accomplished. It is a story of brain and brawn, of multitudinous details, and Brobdingnagian undertakings.

The Huge Locomotive Works at Schenectady, New York, Where Rush Orders for All Types of Steam Engines Are Filled with the Simplicity of a Well-Equipped Store.

BILLETS of iron and steel, tremendously heavy, and giving an overpowering sense of unlimited strength, lay in the dust at one end of the Schenectady shops of the American Locomotive Works. At the other end they were becoming living, breathing monsters of the rail at the rate of four a day.

It sounds big. To see it is remarkable; and, after you have followed the process through, you feel as if you had been present while the earth gave birth to giants. You can talk about it only in circus-poster adjectives.

I was there to find out how they set to work when they are called upon to furnish fifty locomotives in a hurry, an order which they were just now striving to fill. A roundhouse on an important railroad had been burned and fifty locomotives were out of commission. The whole system had been tied up, and the general manager was a mile in the air, refusing to talk to anybody.

What was there for him to do? he asked. He couldn't buy locomotives in a store.

There wasn't a stock of them for him to go and choose from. Nowhere was there a locomotive he could beg, borrow, or buy.

A Rush Order.

Aften ten minutes, he got the American Locomotive Works on the wire, and asked them what they could do to help him out of the hole. The answer came immediately.

"If you are willing to take established types, you can have them in thirty days, delivered four at a time until the order is filled. If necessary, you can have them even faster. On that basis we can deliver you fifty or five hundred."

In making that promise the sales-manager was aware of the fact that the iron and steel out of which some of those locomotives would have to be built had not even been bought; but, in an emergency, he knew that they could get the material somehow. It might take some scrambling, but it could be done.

The order was even then being shoved through the shops. It called for half a dozen widely divergent types, from switch-engines to a Mallet articulated compound; but, as regularly as clockwork, four engines were being shoved out into the world each day. I asked William Dalton, the chief consulting engineer, how this rush order could be filled so readily.

Saving Time.

"Half the work was already done before the order came in," he replied. "They were willing to take our standardized types, and saved two-thirds of the time. As soon as the order arrived it was possible to turn the work in the shops directly over to it. Time is consumed not only in the actual construction of the engines, but in planning them out on paper. If conditions on all railroads were the same, so that they could all use a limited number of established models, the manufacture of locomotives would be as quick and easy as the movement of one machine. As it is, however, every railroad has particular conditions to meet and presents certain specifications. To meet these requirements an engineering department of 500 men is necessary. We have filed away in our library over 100,000 variations in the types of engines.

"Sometimes the variations are small, sometimes great, but a locomotive is such a perfectly balanced structure that a change in any part means the readjustment of the whole locomotive. Our ordinary orders require weeks of figuring before the work begins, and in some cases the plans for a locomotive remain months in the drafting-room before they are turned over to the shops. When C. J. Mellin evolved the first big Mallet that was ever built, he figured on it steadily for five months before he was able to get the proper adjustment.

"When he had finished he had found a way to distribute the weight evenly between the forward and the rear drivers. But, when a railroad orders Mallets and asks for changes here and there, it is necessary to figure the whole engine in its every part to bring that weight distribution just right."

He led the way into a big room where most of his staff were at work over desks, figuring sizes, weight, and strength.

"Those men," he said, "are all laying out an engine. Each of the three hundred in this room has a share in it, and the thoughts of all are constantly centered on the final result.

"Outside in the shops you will find the counterpart of each one of these men, but it will be a hammer, machine, or forge. Each man in this room must make his part fit into the whole to meet the exact requirements of the engineer in charge of the work. In the same way the product of each hammer, machine, and forge must be exactly right when it arrives at the assembling-floor where the engines are put together.

"In a hurry order this half of the work has been done. It probably took months of figuring to arrive at the model used, but it is all on record. To start the work it is only necessary to send out the blue-prints to the shop and the order-books to the purchasing agents. That is why we can make locomotives while you wait."

But, since this preliminary work is essential, I stopped to learn how it was done before following the rush order in its rapid progress through the shops.

Plans and Specifications.

Orders are all received through the New York office, and are forwarded immediately to the engineering department at Schenectady, which plans the work for the ten separate shops operated by the company. With each order comes specifications made by the railroad, and it is very seldom that two railroads make the same demands. Three things decide the size and form: the grades on the road, the speed required, and the weight of trains the locomotives will have to haul.

Orders of any size are rarely all for one type of engine. In an order for thirty locomotives there will probably be five or six different styles, and, in the case of each, as far as the engineering department's labor is concerned, there is as much work as if each style were a distinct order by itself.

Each requires an entirely separate set of figures. Roughly, the chief points covered are the weight of the engine, the diameter of the cylinders, the stroke of the piston, the size of the wheels that can go with these specifications, and the boiler capacity to furnish steam for cylinders of that size.

Each set of these figures must bear an exact relation to all the others, and no one of them can be absolutely determined upon from the start. The only fixed considerations are the physical features of the railroad for which the engine is intended. These cannot be changed. The grades must be coped with, and the railroad has determined on the size of trains and the speed at which it expects them to travel.

In making this nice adjustment, and at the same time getting all the power and speed the railroad requires, there is always the danger of putting too great a weight on the axles. Aside from this, the engineers always succeed in meeting the specifications, but to do so requires a corps of high-priced consulting engineers. Whenever an order comes in requiring a variation in type, Dalton, their chief, assigns to one of them the duty of arriving at the desired end as best he can. This happened in the case of the first big Mallet referred to. Mellin, who evolved it, is one of the consulting engineers, and, as part of the day's work, he figured out the engine that has revolutionized the hauling of freight.

Diverse Designs.

In this case the work happened to be particularly hard, as there was an engineering problem to be solved that had never been met with before. It required his constant attention, and he figured out the whole engine practically by himself. Ordinarily, his duties are more general.

From his varied experience, he knows what style of engine is necessary to do certain work, and the average order that comes before him is usually but a variation of some model that has become standardized. It is only necessary for him to establish the larger proportions in a general way. He has always at hand a whole body of assistants ready to seize upon the details and work them out. But, as there must be a head, he places in charge an "elevation man."

The general proportions he has established bear about the same relation to the finished locomotive as an artist's model to the completed painting. The "elevation man" wields the brush. He is the engineer's painting arm. He must know exactly what the engineer is driving at, and, to have that information, must be a first-rate engineer himself.

He draws a general outline of the engine and then begins the intricate and delicate task of building a locomotive on paper. It goes on in two directions at once, and involves all of the three hundred men in the room.

Figuring and Refiguring.

On one side of the broad central aisle are the draftsmen figuring on the parts, deciding on the necessary size of rods to meet the strain, the thickness of the boiler required for a certain head of steam, and all the thousands of details, each one of which must be varied to meet the requirements of the whole. All the time they are working on these details, the calculating department is paralleling their work, comparing one part with another, and noting the necessary variations in the different parts in order to arrive at the required design.

During this process, which may take a few weeks or many months, no one portion of the engine is absolutely fixed as to size, and the temporary results arrived at by the calculating department are being constantly transmitted to the busy draftsmen, who, as rapidly, are forced to change their drawings and figure over again the strain on the rods, the thickness of the boiler, and all the other details.

Usually, after each detail has been figured again and again, and the calculating department has got down to a basis of estimate, the elevation man discovers that the nice balance required has not been attained, and it becomes necessary again to alter the parts throughout the whole engine.

In the Mallet, on account of the exact distribution of weight necessary between the forward and rear set of drivers, this difficulty is doubled, but in any engine the weight must be so evenly distributed that it will be the same on all the drivers.

The process of figuring may be necessary several times, each new set of calculations coming nearer to the requirements, until

finally the exact size and weight for each of the thousands of parts has been figured down to the last degree. Then an expert takes all the figures and verifies every detail.

Securing Materials.

Meanwhile, if no attempt were being made to push along the work, weeks would be lost in obtaining the material. As it is, long before the work has been turned over for the scrutiny of the experts, the material is underway, and by the time the blue-prints are made from the drawings the material is all at hand, so that the shops can begin work at once.

Getting things ready from the material side demands constant attention from the start. As the work of figuring the size and weight of parts begins to take form, a pretty general idea of the amount of material necessary can be obtained.

In order to get the orders in as quickly as possible, there is an elaborate system which moves forward day by day automatically. It involves the filling out of many forms and the writing up of many books, each of which fills a definite part in the system, and advances as of its own momentum. This system is far too elaborate to be more than outlined here.

Some portions of the work take longer than others, and, in order to get the greatest speed, work must be started on these first. In other portions there is difficulty in getting material. The steel mills are often slow in deliveries, or the brass foundries are far behind in their orders. The market for steel castings, axles, or boiler-plate may vary from day to day, and the system must be constantly altered to meet these outside conditions.

One date is always fixed—the day on which delivery must begin. It may be ninety days, sixty days, or even thirty days or less, and all other dates must be figured with that as a basis.

The Purchasing Agent.

The men at work determining the size of the parts have a certain date on which they must have prepared the information for the purchasing agent, so that he can go out into the market and buy what he needs. Delivery from that point on depends on his ability to get the material, and, as he is allowed only enough time in which to make his purchases, that date is final as far as the engineering office is concerned.

Just to keep these orders up to date is a whole system by itself, but it is so simple that the chief engineer can at any moment run his finger down a column and tell exactly what portion of all the vast amount of work in the shop is behind time.

As long as the work is under his immediate supervision, he can keep it up to the mark, but the moment it gets beyond him, he has to contend with the inclination of all things to go wrong, not the least of which is the tendency of cars to go astray. Ordinarily enough time is allowed in the schedule for the cars to arrive by the most devious and roundabout way, if they insist on being perverse, but, when there is a rush-order on, cars must come through on schedule.

An Army of Inspectors.

To meet this emergency, there is a large body of men whose sole business is to climb in with the material and conduct it personally from the mills to the locomotive works. These material-chasers, as they are called, have much the same duties as the supercargoes who used to be sent with cargoes of merchandise on sea voyages.

As long as the cars keep on the move they have nothing to do, but the moment one is side-tracked or shows an inclination to wander from the prescribed path, they set up a howl that straightens things out in a jiffy.

In placing the orders, the purchasing agent sends with each an inspector to see that he gets what is wanted. In point of fact, the mills from which the concern buys are filled with inspectors all the time. Orders follow one another so rapidly that they never have a chance to leave.

When the order leaves the mill, it is, as far as the inspector can tell, exactly according to specifications; but, upon arrival at the shops, it must go through the hands of the testing engineer. He analyzes it chemically, and puts it to all sorts of tests and strains to see that it is perfect. Then it is delivered at the shops, where it is worked over into the required parts.

The inspection does not even end there, but continues through every process. Even those huge billets of steel and iron are ordered in much larger sizes than necessary, so they can be sawed at the shops on the chance of discovering possible flaws. Later, I noticed a small pile which had developed defects and had been set aside to be shipped back to the mill.

The first half is now done. The engine

is built on paper, and the material is at hand for the actual construction. It has taken the constant, intense efforts of five hundred men, but it is difficult to grasp the bigness of it, even after you have seen the backs bent over desks, and the minds strained in calculation. This is the point from which the work starts when a rush order is received. From now on the magnitude of the task holds you fascinated.

It lies before you like a panorama, and progresses with the rapidity of a moving-picture film. You go from shop to shop, the wonder of it growing on you, until all at once you are on the assembling-floor, standing in a trance, completely overwhelmed by the work of creation that is going on before your eyes, while locomotive after locomotive is built in all its naked strength.

In picturing the work, my mind constantly reverts to those billets of iron and steel. I feel as if I could not have understood the size of the task, if I had not seen them lying there in the dust, waiting to be given life.

First they are shoved into a white-hot furnace. Then, at the right moment, steel hands reach out and fling them under the steam-hammers, and the work of building an engine is under way.

With a smash, the hammers thunder down, tripping so fast that the sparks fly in a steady shower. They seem intent only on hitting as hard as they can, as they plunge wildly up and down, but behind thick masks, close to the red-hot metal, stand some of the most skilful and highest-paid men in the shops, watching the effect of the blows, and directing the power behind the hammers with consummate skill, and, as the half-molten metal is turned beneath the hammers, they smash or pat it as the occasion requires.

Presently the steel begins to take form, with bends and curves here and there, and when the forgings are set aside to cool from an angry red to black, they have all the dimensions of size and shape indicated in the blue-prints lying beside the hammers. All they need now is to be planed smooth, to take their places in the frame that holds the boiler solid to the axles.

A Weird Spectacle.

Across the way, in another enormous shed, an even more spectacular process is under way. At first glance, it is like one of the scenes in theatrical pieces where the center of the earth or the inhabitants of the moon are produced, with the exception that the stage effects seem frauds, while this looks like the real thing.

Through a dust that rises thick in the air you can see earth-gnomes bending down over molds into which molten metal is running from some place far aloft like water out of a hose. Under the strong light shining down their bodies are distorted and dwarfed, and it is hard to believe that they are men making cast iron. Even later, after the strange influence of the light on the dust has gone, when the castings arrive at the assembling-floor, they bring back vividly the picture of their origin, and seem hardly to have been made by human hands.

All that was gigantic in those two sheds becomes but a background, however, the moment you step into the boiler-shed. Scattered thickly over the whole extensive floor surface lie hundreds of boilers in every stage of construction, from the solid sheets of steel to the completed structures, with the hoods on, tubes fitted, and fire-boxes attached, waiting to receive their numberless fittings.

In the Boiler-Shed.

The impression you get is that of a vast collection of shells of some prehistoric lobster bigger than a mammoth, and that ruled the land and sea. If the billets of steel and iron gave a sense of power derived from the earth, these huge boiler-shells increase it a hundredfold. When you see the solid sheets of steel bending unwillingly beneath the rollers, you get an undeniable impression of the life inherent in them, which is only increased when they have been bored full of holes that are plugged with stout rivets. Through it all is the deafening racket of the boiler-shop.

Much of the less conspicuous work goes on almost unappreciated by the visitor. There is so much of it that the mind cannot grasp it all at once. Lathes cut constantly at one surface, tires are shrunk until they grip the wheels in an everlasting hold, smoothly working, inconspicuous machines turned endlessly on the lesser parts, tenders and cabs appeared as if by magic. It was only among the steel forgings that the bewilderment ceases.

Here all those parts which must bear the great strain are being made. Their number is now much larger than it was a few years ago. In time they will practically supplant all other forms of steel and iron. With larger engines and constantly increasing speed, there are now many parts made of forged steel which were cast iron in the engines built only a short time ago.

In the midst of all this work you see the one thing you forget until your attention was called to the little partitions at one side—the local drawing-rooms. In each are three or four men constantly receiving orders from the office of the chief engineer, and interpreting the blue-prints to the pattern-makers, the molders, the boiler-makers, and the men who are directing the countless machines, spelling out the orders in terms of steel.

Among them move the inspectors, the testing engineers, even inspectors in the employ of the railroads for whom the work is being done. Every part of every engine, no matter how great the hurry, passes through the hands of each of them, whose duty it is to detect the least imperfection and the slightest possible flaw. It makes no difference if it does cause a delay, nothing can pass their hands that is not absolutely perfect.

The Assembling-Floor.

At this point you begin to appreciate the fact that you have been moving in a circle, and the product of each shop has been shoved along toward a central point—the assembling-floor. In an hour you have caught up with work that began two weeks before where you did. Here, on the assembling-floor, the boilers have found a solid seat in the saddle between the cylinders, the smoke-stacks are being put in place as if they were hats, and the work of connecting up the drivers, with all the many details that lay between the lever and the piston, progresses so rapidly that what were mere skeletons a few days previously are now ready to be sheathed and take the road.

The certainty with which each part finds its place makes it appear as if the boilers were great magnets that attracted what they need from the surrounding shops, until they are completely outfitted with all their parts.

When the skeleton of the engine is yet uncovered, it gives an appearance of strength it later disguises. The very rivets studding the boilers speak for the concentrated, throbbing power about to be created within.

I was fortunate in seeing at this stage several 440,000-pound Mallets, the biggest locomotives the world has ever seen, and, without their outer coverings, they looked several times as large as they really were. But, even reducing them to their real proportions, it seemed as if there has never been a road-bed constructed that could support them.

They were in all conditions, from the time when the huge boiler-shells were being placed on the trucks to that critical moment when the monster first feels the breath of life. Of all these stages, the most impressive was toward the end when the whole body of the boiler was being swathed about with a white, heat-retaining compound preparatory to placing over it the sheathing that disguises its crude strength.

Filling the Bill.

A few final touches of paint, a careful inspection of every joint, and the trial engineer was getting up steam in the one just completed. Slowly it began to throb with the new life, and carefully it was taken out and put through its paces. Everything was in its place, every part true; there was only one serious danger—a hot box.

It was the fourth one that had gone out that day, and with each had gone a trial engineer, who remained with it until it had entirely found itself. In this case it was going to help fill the rush-order, but it might have been going to Chicago, California, Peru, China, Argentina, Egypt, Persia, or South Africa. In any case, the engineer would have gone with it to teach it how to behave.

Afterward, when I saw other such engines as those breathing heavily at stations, or tearing across the country, with seventy-two solid freight-cars behind, their sleek sheathings no longer hid their double-riveted boilers, and even the tread of the wheels only made me conscious of the pressure behind the piston.

As I close this article the news reaches me of a rush order for eighty-five locomotives which has just been received by the Baldwin Locomotive Works, Philadelphia, a powerful competitor of the American Locomotive Works with an equipment similar in every detail to that of its rival. This large engine-building plant has been called upon to furnish $1,250,000 worth of locomotives for the Harriman lines, with deliveries to be made during the months of October, November, and December. If the order is filled during the time called for in the contracts, and there is every reason that it will be, it means that during the next six months the Baldwin plant will finish, on an average, a locomotive every other day to be used over the divisions of the Harriman system.

The order is one of the largest on record since the financial depression of 1907-1908, and shows a tendency away from the policy of retrenchment that it was feared that a number of the railroads have been contemplating.

THE MAN WHO WASN'T GAME.

BY WILLIAM S. WRIGHT.

I Manage to Make My Way Beyond the Limits of Western Civilization.

SYNOPSIS OF PREVIOUS CHAPTERS.

JOHN ANDERSON, at the age of thirty, down and out, relates his experiences and hardships. At the age of twenty-one, resenting a reprimand from his father, he ran away from his home, taking with him twenty dollars which he had received from his mother to make some purchases in a near-by town. Arriving at the city at night he lands in a miserable hotel where he pays ten cents for a bed. Here he meets a man calling himself Billy Brown, who immediately adopts him as a pal, taking him to breakfast the next morning and telling him he can put him next to a good job in the evening. Billy is recognized on the street by some detectives as Red Pete, wanted for a bank robbery, and in the succeeding chase he is shot. John Anderson, or Andrews, as he now calls himself, is arrested as his accomplice.

CHAPTER III.

Put Off the Train.

THESE chronicles are not intended to follow every detail of the exciting life-story that I shall set forth herein. I shall be content to relate only the most graphic happenings—the most blood-tingling and hair-raising that came to me in my wild career as a wanderer.

On the day after my arrest in Omaha as Red Pete's pal, I was released by the police judge. He was willing to take my word that I had never met my companion of the night before until I awoke in that vermin-ridden sleeping-house.

Red Pete, for it was really he—a notorious robber who had fallen into the clutches of the police—very kindly offered the information that I was not in any way connected with him, and that he had no pals whatsoever.

This evidently impressed the judge. He told me that I was free, but he gave me twenty-four hours in which to leave town.

I did not wait until the twenty-four hours were up. The first train that I could get for the West, I boarded. It was not a freight. It was a passenger.

I stowed away under a seat in a day coach, and hid there successfully, suffering more tortures than ever could have been meted out to any other man, until the train stopped at a small town in western Nebraska.

A woman who had been sitting in the seat under which I was hiding, dropped her bag as she was making ready to alight. As she stooped to pick it up, she spied me, and set up the most frightful yell that ever I heard.

In a moment, every other passenger in the car came to her rescue. They must have thought that she was about to have a fit, for she seemed to be unable to utter a word.

Heaven knows how I wish that it had been so. But what she could not make up for in speech, she accounted for in signs. She pointed under the seat and—

In a moment I was dragged out by rough hands. One passenger punched me in the jaw—for what reason, I do not know. This was a signal for the others to add to the pummeling that I was in for, and it seemed that every other man that could crowd around wanted to land on my jaw for good measure.

I was so terribly cramped from my long ride under the seat, that I could not find strength enough to punch back, but I did want to hit that fellow who hit me first.

I don't know what they would have done

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to me if the conductor had not come along at that moment.

He brushed some of the passengers aside and asked me what I was doing. I told him the truth. Then he turned on the passengers and said:

"It would be a good thing to ask a man who he is before doing him up in this manner."

He had a kindly spirit. He was human. He knew when a man was down. He saw by my punched and bleeding face that I had the worst of it, and he was for teaching those brutes a little lesson in human nature there and then.

"He has told the truth," he added.

The passengers began to move back, abashed.

"Where do you want to go?" asked the conductor.

"Most anywhere," I replied. "I thought that I would strike out for the West."

"Well, I'm sorry," he continued, "but I must put you off here. It is against the rules, you know."

No, I did not know, but somehow or other I did not care.

He took me by the arm, led me to the rear platform and down onto the station. By this time the passengers had alighted and the train evidently delayed by my discovery. The kind-hearted conductor waved a high-ball and jumped aboard. In another minute he was out of sight.

There I was—left on the station of a water-tank town. It was evident that the train did not stop there every day, for the place was thronged with a queer idle crowd. The populace had evidently come to the depot when the train whistled that it was going to stop.

When they saw the conductor politely deposit me in their midst, they eyed me curiously. They were mostly farmers who had driven into town. There was a smattering of cowboys and not a few women and children.

One of the cowboys approached me. I must have been a sorry-looking object. One of my eyes seemed to be closing and bulging, and it was mighty sore when I touched it. There were several places on my face and neck that felt pretty raw, and the blood was trickling down my shirt.

A cowboy came up to me, and the crowd gathered around to hear what I had to say.

"What happened, cully?" he asked.

"I was put off the train," I replied, "because I was stealing a ride."

I then noticed that one long, lank, individual in the bunch disappeared in a hurry and started across the dusty pike.

"What ye goin' to do here?" asked a big burly man with a heavy mustache.

His question was so foolish that I did not answer. I looked around to see if there wasn't some water handy so that I could bathe my face.

I moved around to the side of the little station house, when I noticed the long, lank man returning with a somewhat husky black-bearded man who carried a short club and wore a large star on his left breast.

My intuition—which had stood me in such good stead all these years and which seldom has failed me—told me that this man was the police force of the place.

I was not wrong. He came up to me like a cyclone. The crowd had gathered around in such numbers that I was now hemmed in and it was impossible to make any headway.

"Who are you?" asked the bearded man with the star.

"Who are *you?*" I replied. "I am a stranger in this town. I was put off the train for not having a ticket. I got badly done up. What are *you?*" I asked again.

I marveled at my impertinence.

"I am the county marshal," he said, and, without any further ceremony, caught me by the arm and dragged me off to the lock-up.

For the second time in my short career as a free-born wanderer on the face of the earth, I was locked up. Just why I should have been accorded such treatment, I could not understand, but I was overjoyed when, a few hours later, I was brought before the town squire and released.

Surely the judges have more to commend them than the police.

This squire, a young man evidently of good breeding and education, who, I afterward learned, owned a large ranch in the vicinity, asked the marshal why he had arrested me.

"He looked to me like a bum," said that worthy.

"Just because he had been put off a train and was badly beaten, he looked to you like a bum. It never occurred to you that this man might be in pain and need assistance, did it? If you had been in his place, bleeding and friendless in a strange town, would you have liked such treatment?"

The county marshal looked then like a whipped dog.

"Answer me!" shouted the squire.

The marshal could make no answer. He

simply looked at me and walked out of the court. I was set free.

Would that there were more men tempered with such mercy as that young purveyor of the law in that Far Western town. Should he ever come across these lines, he will know who writes them.

I was at liberty again—as they say of the prisoners who have served their terms. I walked out of the court and men came up to me and congratulated me. Others sneered and made remarks that dubbed me as an unpopular candidate for further residence in that town.

But I had one desire, and that was to wait and shake the hand of the man who had set me free after such an ignominious arrest. I waited at what seemed to be the only entrance to the little court-house, and soon was rewarded by the appearance of the magistrate.

I walked up to him and held out my hand.

"I want to thank you, sir," I said, "for your kindness to me—for the justice of your words."

He took my hand and shook it.

"No one need be thanked for doing what is right," he replied. "You seem to be in a pretty bad way. Here. Go down to Clawson and tell him that I said to fix you up for the night."

He handed me a ten-dollar gold piece. Then he bowed pleasantly and walked over to his horse, which he mounted with alacrity, and rode off.

I looked at the coin. Great Scott, but it was welcome! There was life in the old land again.

Clawson's was the only hotel in the village—which I will name Grinnell, for obvious reasons. Clawson's was to Grinnell what the main store, post-office, and saloon, when combined into one inharmonious whole, are to the average one-horse town. It was the Waldorf-Astoria of the place—it was also the Bowery Retreat.

I made my way to its hospitable doors, and Clawson himself met me. He was behind the counter. I guess some queer ones had asked for lodgings in his time, but, perhaps, I gave him more cause for sudden fright than anything that he had seen in years.

He leaned over the ledger as I came to a stop in front of him, and before I had time to utter a word, he said:

"You're the guy what was thrown off the train this mornin', ain't you?"

I nodded.

"Well," he went on, "you don't get nothin' here."

"Squire Oliver told me to come here," I said, not without some feeling of resentment, "and told me to tell you to fix me up."

"Squire Oliver!" He drew back. It was evident that I had struck a vital spot. But he changed his facial expression and said:

"That don't go down with me, young man! Any funny business around here, and I will have you up 'fore the squire to be sent to jail."

"Squire Oliver sent me here, and if you don't believe it, ask him!"

My ire was up. "And if there is a law in this State demanding that a hotel-keeper take a man in when he has the money to pay, I'll ask the squire to put it in force!" I answered, as I took the ten-dollar piece from my pocket and rang it on the counter.

Just then the county marshal ambled in and noticed the argument. He gave the belligerent Clawson the signal that it was all right, evidently, for Clawson turned the register to me, and I started to sign.

"In advance," he informed me, before I had time to write my name.

I passed over the gold coin. He rung it hard on the counter. At its sound, a red, grizzle-featured man who was sitting near the stove looked up. Clawson took a key attached to a huge brass disk from a board over his safe, and personally conducted me to the top floor—the third—of his hostelry, down a long narrow hall, at the end of which he unlocked a door.

He took me into a small room and asked me how long I intended to stay.

"Till the morning," I replied, not knowing how long I would stay.

"All right," he replied, "I will send you up your change in a few minutes."

He sent up nine dollars. He had charged me one dollar for that room for one night. That was going some, and especially when my capital was so very limited and uncertain. And still, in view of the wishes of the good young squire, I could not have done otherwise.

Clawson had showed the way to a large public bath at the end of the hall, opposite my room. I was soon in there and in the cooling, welcome water. Great Scott! as I look back now, that bath felt so good that if I had any adverse thoughts toward humanity they were quickly dispelled.

The water did smart the chafed spots on my face and neck, but it eased my black and swollen eye. Once clean, I returned to my

room, turned the key in the door, and threw myself on the bed for the first good sleep I had known since I left my home.

CHAPTER IV.

The Night at Clawson's.

I WAS suddenly awakened by a strange sensation at my throat. As I came to my waking senses, it dawned on me that I was being throttled—a human hand was on my throat and my head was being pushed against the wall.

I opened my eyes and they were blinded by a sharp white light. I struggled and could see that it was night, and save for the sharp light that the attacking party tried to blind me with there was no other light in the room.

My assailant had a desperate grip on my throat, and he only used one hand. But I could feel that it was a very big hand, for I grasped it with my two in an effort to release its clutch.

As soon as my assailant saw that I meant fight, he raised the lantern that he was holding and brought it down on my shoulders. He had aimed for my head, but missed. Then I began to realize that I was in a more desperate corner than I had at first imagined.

He was evidently a burglar who had the proper tools, for the lamp was one of those long, round-shaped affairs that have an electric attachment and throw a small piercing bull's-eye light as steadily as a ray of the sun.

In the darkness, I could feel my assailant. My hand now and then touched his skin as I struggled to free myself. It was cold and clammy. Finally, mine ran across his face in an effort to get at his throat.

I managed to get a grip on his hair and, with more violence than I imagined I could summon, I threw him backward on the floor.

He went down heavily. I groped about for a light, but, before going to bed, I had failed to locate the matches. It was daylight when I had flopped on the bed. Now it was night.

"Who are you?" I shouted.

He made no answer.

Presently I heard him fumbling. He seemed to be making for the door, but in that awful darkness, it was impossible for me to do anything. The room was very small and there was one window beside the bed, while the door was about three or four feet from the foot.

I gathered my senses, and said to myself that it would be best to get into the hall and make an outcry.

I made for the door, but, in the darkness, I stepped on the body of the intruder. As I stumbled forward, he, by some peculiar grip on my wrist, threw me to the floor. I crashed down, bumping my head against the foot of the bed.

In a moment he was up and had struck a match. As he did so, I heard the click of a revolver being cocked. Just as the match flared up I saw the burglar standing over me.

"Don't get up," he said, "or I'll put a load of this in you."

He stepped to a small table—the only other article of furniture in the room besides the bed—and lit a candle.

As its light filled the room, I noticed the red and grizzled features of the man who was sitting by the stove when I paid Clawson the money.

He was not typical of the West—not the Western man that I knew and was accustomed to meet. He was large and beefy. His face was particularly red and freckled, and his hair was also red and somewhat long. He wore no mustache, but his face was covered with a stubble beard of the same color as his hair.

"Where is that money?" he said. "Come, be quick! Where is it?"

"What money do you mean?" I asked.

"You know! And don't ask me any questions. The money that Clawson handed you this afternoon. The nine dollars change."

My fortune was going. Against that muscular man, armed with a six-shooter, I had no chance.

"Hand it over, quick!" he shouted. "I want to make my getaway!"

I dug into my pocket and took therefrom the money—and handed it to him.

He put it in his pocket and backed toward the window.

"Don't you dare leave this place till daylight. If you do, you will be killed! There is nothing for you to do but stay here!"

He went out of the window backward. It was evident that he entered by a ladder. I was not going to lose my coin so easily, and he was not going to make his getaway without some sort of a struggle.

Just as his head disappeared below the sill, I blew out the candle and made for the window.

I let out a cry that must have awakened every man in Grinnell, for instantly there was a crowd with lanterns and all manner

of shooting-irons. Clawson came to the door with a big lamp which shed a welcome light on everything, and after making what explanation I could, we went down to the office, which was now thronged with excited cowboys and others.

In the midst of all stood my friend the sheriff.

He was clad only in a suit of red underclothes. He had gotten out of bed to be of official service, but he had not forgotten to pin his gleaming star on his shirt. I wondered if he slept with it on in case of just such an emergency.

Being an officer of the law, he was among the first to be recognized. Finally, he said to Clawson:

"What has he done now?"

"He says that he has been robbed," replied the hotel proprietor. "I changed a ten-dollar piece for him this morning in payment for a room, and he claims that a man broke in on him and robbed him."

The marshal was for disbelieving me. I could perceive that by the look that was coming over his face. I looked straight at him and said:

"You're going to tell me I'm a liar! I can see that in your face. I don't care whether you believe me or not, you can go around to the window and see the ladder standing against it."

"That don't go down with me!" he said. "I just think I'll take you in as a suspicious character. Squire Oliver ain't the only one in this town, and I guess we can prove somethin'."

"Hold on there, marshal." It was a sharp clear voice—a voice that I had not heard before. The speaker had just entered, and he was somewhat fatigued. It was evident that he had been running fast.

"What you got to say, Len," said the marshal, addressing the newcomer.

"I believe this man—and furthermore, I saw a fellow riding down the pike at a pretty fast gait just a while ago. He looked to me like he was on your white mare. I heard the noise, and I came up to see what's happened."

Whoever Len was, his word evidently went for something. The marshal lost no time in making his escape. He rushed over to his own home, and, in the early dawn, which was now just breaking, he could see that his white mare, which usually had the run of a small corral, was missing.

I gave as good a description of the man as I could, and he was immediately recognized by Clawson. Then a posse was formed and the bunch set out in the early morning light to run down the robber.

They followed the road as far as the nearest village—a distance of six miles—only to find the marshal's mare, foam-flecked and panting, standing by the roadside. Nobody in that village had heard anything of the robbery or seen the man.

The only reason that could be given for his escape was that he had arrived in time to catch a freight that was just pulling out.

They brought the mare home and the marshal was satisfied as to my innocence. But I could only think of the nine dollars that had gone and wondered why fate had willed to treat me so harshly.

Clawson, instead of turning me out on a cold world, gave me a job in his kitchen "till something better turned up," as he put it.

I took the place gladly, for I was strong and willing. But the work was of the filthiest nature imaginable. It consisted largely of cleaning all the utensils on the place, washing the dishes, scrubbing the floors, and similar chores.

I was up every morning at five o'clock, and at eight at night, when the last bit of work was done, I was aching in every bone.

The hard couch, in an outhouse back of his ill-smelling kitchen, on which he let me sleep, was oh, so soft and welcome.

As I always determined to see anything through to the end that I undertook, I resolved to stick to this job until I had saved enough to take me out of the town. I had always wanted to go to San Francisco, and I learned that I could get a tourist's ticket to the California city for the sum of eighteen dollars.

Clawson was paying me the joyful wage of three dollars a week, and I figured that if I held onto the job assiduously for a period of three months, I would save up enough to buy the ticket to San Francisco and a new suit of store clothes, so as to arrive there looking somewhat respectable. Once I struck that wonderful Western metropolis, I thought, I could get a start and make a future.

I worked as carefully as a man knew how. I scrubbed the floors of Clawson's hotel as they had never been scrubbed before. I washed his dishes till the lye that I put in the water ate into my hands and made them sore. He had no cause for complaint and he complained not.

And each week, I saved most every cent of

my hard-earned wages. I took no chances. I put my money in the dollar savings-bank of Grinnell.

How pleased I was when the third month passed and I found myself with sufficient money to buy the ticket to San Francisco.

CHAPTER V.

Shanghaied.

THE journey to San Francisco was devoid of any excitement. I had put up some cold meat and bread in an old cloth which Clawson kindly donated. That is, he donated the cloth. The food he sold me, and at the same price that he charged his transient guests.

It would have been an easy matter to have filched sufficient provender for the trip from his larder, but two things I absolutely would not do: I would not steal and I would not lie.

I arrived in San Francisco one morning about five o'clock. A cold damp fog hung over the city and we sat on the pier at the Oakland Mole waiting for the first ferry to start for San Francisco. I had never seen a more forbidding sight. It was before the "great quake," so I must write of the city by the Golden Gate as I knew it.

When I finally landed on the foot of its most prominent thoroughfare, I put my hands in my pockets and thought of what to do first.

I wandered up Market Street until I came to a small coffee-house and went in. As I sat over a steaming cup of very good coffee and a trio of the best doughnuts I had ever eaten, I took an account of my capital.

I found that I had just seven dollars and eighty cents, so it was "up to me" to find work.

I was fairly presentable, and it should be an easy matter to get something to do. The man who waited on me and who was evidently the proprietor of the place, in response to my question regarding a place to put up at, directed me to a boarding-house near the shipping, commonly known in San Francisco as "the water-front."

Thither I went, and after a short parley of words with the landlord, engaged a stuffy, ill-smelling room for two dollars a week—paying him in advance. At least, I had a place to lay my head at night.

When it seemed to be a reasonable hour for the places of business to open, I started out in quest of work. To relate the untiring efforts on my part to find work and the rebuffs and refusals on the part of the many to whom I applied, would only tell others a story that they know too well.

I walked the streets of that big city for three days, and none would give me employment. I asked for any position, from a clerk—for which I was ably fitted—to chore-boy, but there was nothing doing.

On the fourth day, I managed to secure a temporary place in a stable, not far from the lodging-house where I had my room. The stable-keeper wanted a man to arrive at his place as early as five o'clock every morning, and clean and harness the horses for the various delivery wagons that were lodged in his establishment.

The pay was small and the work hard, but it was a start, and I would live inside the income. I was to receive four dollars a week from him until I landed something better. That was my resolve.

I was making for my place of work the second morning. I had never felt so contented. I knew that the world was again good to me—and I was confident that if I did my work faithfully and kept sober, I would go ahead.

While engrossed in this dreaming, a powerful arm from behind slipped under my chin and threw my head back.

A hand was clapped over my mouth and a hoarse voice commanded:

"Don't make any noise!"

It was still dark and it was impossible to see around me.

There must have been two men at the game, for a pair of hands quickly manacled mine behind my back, and, while my head was being held back and my eyes blinded, a sack was put over my head and tied tightly about my waist.

Then a handkerchief was tied over my mouth. Indeed, so tightly was it drawn that it kept my mouth open and formed a gag.

A voice cautioned me not to speak. I could not have done so had I wanted to.

More quickly than it takes to tell it, a man caught me by either arm and I felt myself being hustled along the street at a most unseemly gait. Twice I stumbled, but my assailants picked me up and pushed me along.

"Hurry him!" I heard one of them say. "Hurry, hurry!" They seemed to be increasing their speed.

What new sort of attack was this, I managed to let whirl through my seething brain.

They hustled me along for a short distance. I stopped once and let my feet drag,

but a sharp and stinging kick on my shin told me that that sort of resistance would not be tolerated.

They quickly pulled me onto my feet, and I felt a kick or two administered to remind me that this was no time for fooling.

Finally, I felt myself being lowered into some place. A rope was placed around my waist and I was let down a distance, dragged a few feet—and my journey ended.

It all happened in such a short space of time that to tell it takes even twice as long. I became exhausted and sat down. Suddenly a peculiar motion seemed to control everything—a gentle motion as a swaying to and fro. It began to sicken me and, besides, the place had a peculiar odor that was heavy and oily.

I sat there wondering if I was being precipitated to the bowels of the earth, when I heard voices.

"Yes, a good prize," said some one.

Then I felt the manacles that bound me being loosened, the gag was removed and I could see.

I was in the hold of a ship—that was plain as day.

I had been kidnaped—that was also evident. But they do not call it by so juvenile a term on the Pacific coast. I was being shanghaied—carried away by force to serve on shipboard.

Three men stood over me. One had a cocked revolver.

"A good husky lad," said this one, eying me. "Did you have much trouble landing him?"

"None," said another. "He came easy enough when we got the gag in."

"Good work, boys," said the one holding the revolver. "Let him lie here till we get outside the heads. Make yourself comfortable, sonny. We'll send you down some grub and water after a while."

They climbed up a little ladder, pulled a covering over the compartment that I was in, and left me there in the black darkness. It was darker and blacker in that awful smelling place than I had ever imagined. The vessel soon began to lurch and roll and my stomach could not stand it. I became deathly sick—so violently sick that I became utterly helpless. For once I asked the privilege of dying.

I was conscious of one thing, however. The place was infested with rats. I could hear them scampering over the board and they squeaked so loudly that the sounds made an almost uncanny vibration in the darkness.

Several times, I am sure, they ran over me and touched my hands. I was not too sick to discern that.

I cried out, I called to God, to my mother, I cursed myself for ever having left home. I wondered just why one who really wanted to do what was right should meet with so many cruel misfortunes.

Not long after that daylight entered again, and with it the three men who had visited me earlier in the day.

"Come on deck," said one.

I was really too sick to stir. One of the men came behind me and urged me to obey with the toe of his boot. I struggled to my feet, my head dizzy from the eternal motion of the vessel, and, with the assistance of two of the men, I made my way up the ladder along a narrow passage, and onto the deck.

The fresh air did seem good—but I was sick, deathly sick. Desperate as those men were, they knew that I was unable to move—that I would be unable to speak even, until the effects of the sea had passed away.

"He's sicker 'n a dog," said one.

"Drag him to the lee scuppers," said another, "and let him stay there till he's all right."

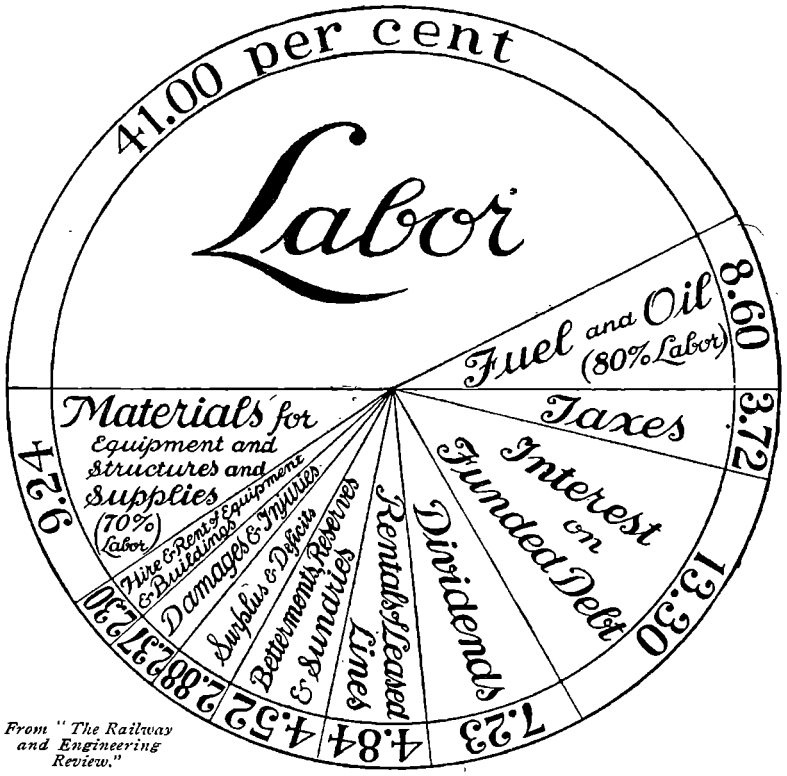
Grab me they did. They caught me by the collar and fairly dragged me across the deck. Then, with their handy feet, they pushed my legs into a position to suit them.

There I lay — for how long, I do not know. The hot sun burned into my brain. The sea seemed to be getting calmer. I was slowly getting my better senses. I could think more clearly, but my legs were weak and my muscles ached.

Then the night breezes came up cool and cooler. I could hear the men going to and fro and smell the odor of their evening meal. It had no attraction for me, however. I wanted to sleep. I closed my eyes, wondering what awaited me on the morrow.

(To be continued.)

A quick exhaust may mean slipping drivers. You can't fool anybody with a loud noise.—The Yard Foreman's Homilies.



From "The Railway and Engineering Review."

HOW THE RAILWAY EARNINGS OF 1909 WERE DISTRIBUTED.

There Was Paid in Salaries to the Railroad Employees of America, in One Year, 41 per cent of $2,604,766,165.

OUT of the maze of statistics of American railroads, presented in the annual report of the Interstate Commerce Commission for 1909, an interesting design has been formulated by *The Railway and Engineering Review*, giving a clear, concise picture of the manner in which the gross earnings of the railroads were distributed during that year, and the large share awarded to each factor that assisted in the maintenance and operation of the great common carriers of this country.

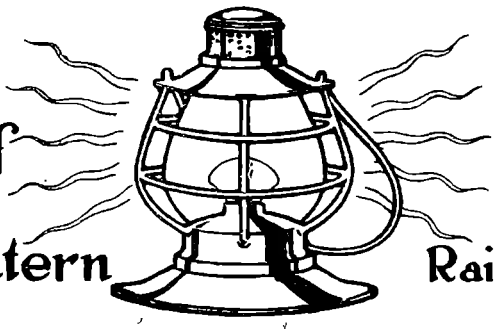
The huge railroad pie at the top of the page may well be considered a toothsome morsel when the reader stops to realize that it represents a total value of $2,604,766,165. It is enough to make one's mouth water for a good big bite, but the mouths of railroad men have not watered in vain, for theirs was the biggest piece of all. The large section of the diagram labeled "Labor," represents over a billion dollars, and, though it had to be divided up among over 1,500,000 men, ranging from presidents to track-walkers—there was a share for every one.

Those who may have been inclined to think that capital sometimes gets more of the profits of a railroad than it deserves will be amazed at the three small divisions showing the proportion of earnings that go to stockholders and Wall Street indicated as "Interest on Funded Debt" and "Dividends," all of which total only a little more than half of what goes to make up the railroad men's pay-checks.

What the railroad men get represents a little over one-third of the whole pie, but it may well be large, for it is the share of the men whose hands and brains have kept the trains running on time and who have helped to build up the passenger and freight receipts. It represents many days and nights of ceaseless toil, with heavy wear and tear on muscles and gray matter of the army that makes the operation of our railroads possible.

WHAT'S THE ANSWER?

By the Light of the Lantern



Questions Answered for Railroad Men

ASK US!

WE like to be as useful to our readers as we can; but, because of the great popularity of this department, we are forced to impose certain restrictions. It is limited to the answering of questions of an informative, technical, or historical nature only. Letters concerning positions WILL NOT be answered in this department. All letters should be signed with the full name of the writer, as an indication of his good faith. We will print only his initials.

PLEASE explain the Brown system of discipline as applied to railroads.—A Reader, Nevada.

This means discipline by record, instead of being actually administered. In other words, suspension by record instead of actual suspension. The record is in the form of demerits, and the system as a whole is very similar to the form of discipline employed in the public schools. To simplify: When a road finally decides to inaugurate the Brown system, every employee has his past offenses forgiven and every employee affected by the system starts with what is called a "perfect" record.

If a breach of rule should occur, the offending party, after investigation, is penalized with a number of demerit marks on his record equal to the gravity of the case. For instance, leaving a terminal without examining to note whether the tender-tank contained water, might result in five demerits on the engineer's record, if a subsequent delay ensued. Running by a train standing at a station on a double-track road might be punished by ten demerits, and so on.

The Brown system does not extend to shopmen, but includes practically every one in the train service on the roads where it is employed. As a rule, when the record contains fifty demerits the man is warned, and when one hundred demerits are in evidence he is dismissed from the service. The system is also retroactive, as every year with clean records effaces so many demerits—say six or even ten—and thus the incentive is afforded for a man to wipe out previous bad marks. By this elimination process it is possible to return to a "clear" record, but it is not possible to return to a "perfect" record, as the latter is one which has never had a mark set against it.

The Brown system, of which the above is the general outline, has been extensively employed by railroads of this country. The New Haven uses it in its full acceptance, the Erie in part, and the Santa Fe in part. It has been found to be effective in securing the ends of discipline, more so in fact than the former system of actual suspension. In the latter, a man could not wipe out a bad record, but this is thoroughly possible by two or three years' cautious work under the Brown system.

A. E. H., Brainerd, Minnesota.—So far as we can learn, there is no intention to change either the name of the New York, New Haven, and Hartford or the Boston and Maine, no matter what consolidation may be effected. As you are probably aware, the general status of this entire matter is imperfectly understood, and we have not seen any official statement issued by either company.

WHAT is the idea of an engineer having steam on his engine while coming down about a one-per-cent grade with a full line of freight-cars behind him? I have noticed particularly that freight-trains in this country always exhaust the same as would take the engine up-hill.

(2) C. P. Railroad passenger-engines have three large wheels on each side, but the connecting-rod or rods are only connected to the two nearest wheels to the cylinders. The rear wheel is slightly smaller than the others and runs free. What is the idea?

(3) I have noticed engines on the C. P. (Montreal line) when steam is shut off it still escapes from first one side and then the other with a noise like cracking a whip. Please explain this also.—A. P. W., Toronto, Canada.

(1) Running a freight-train is a fine art, and it cannot be well explained from an editorial office, as there is always present some local condition in which the engineer must take the initiative. We cannot say from here why, in this instance, he should "pull" his train down a one-per-cent grade, as they will roll down plenty fast enough, requiring in fact very careful braking to hold them.

[We shall endeavor to explain this question fully in an article which we intend publishing in an early number.—THE EDITOR.]

(2) Your question suggests the Atlantic, or 4-4-2 type, having a four-wheel leading truck; four connected drivers, and a trailing truck, the latter being the somewhat smaller pair of wheels to which you refer. The use of the trailing wheels is necessary when the fire-box is widened for additional grate area, and placed behind the driving-wheels. The trailing-wheels carry part of the weight of the engine in that quarter, and are generally designed to have some side motion.

(3) This noise is occasioned by the escape from the cylinder by pass valve. This is one of two small double-disk valves mounted in chambers bolted to a steam-chest containing a piston-valve. The larger face of the by-pass valve is in communication with the interior or steam cavity of the main piston-valve, while the smaller face is on the side toward the cylinder. If, from any cause, the pressure in the cylinder should increase to a dangerous degree, the by-pass valve acts as a relief valve, and opens communication between the cylinder and the steam chamber inside the main valve. When running with the throttle closed, as your question suggests, the by-pass valves allow communication to be established between both ends of the cylinder, and the interior cavity of the piston-valve equalizes the pressure.

HAS the St. Louis and San Francisco Railway any all-steel passenger-trains in operation?

(2) What is meant by the percentage of a locomotive?—E. R., Parsons, Kansas.

(1) They have none, so far as we have been advised.

(2) Never heard of locomotive percentage.

I. A. H., Wilmington, Delaware.—We cannot recall at this writing any publication devoted exclusively to the consideration of steel cars, whether passenger or otherwise. All the standard technical publications, however, devote ample space to this subject when it warrants sufficient interest. *The Railroad Age-Gazette*, New York City, can always advise you on any point relating to this construction if you will communicate with them.

H. M. G., Williamsport, Pennsylvania.—The late arrival of your query regarding the two heavy Mallet compounds which you recently noticed, prevents reply in this issue, but we will have the information in the next number.

WHAT must be the proportions for a single-riveted lap seam made of iron plates and with iron rivets to get the maximum strength?—M. B., Baltimore.

If the plates have a tensile strength and the rivets a resistance to the shearing equal to fifty thousand pounds per square inch, the *rivet holes* (not the diameter of the rivets cold) *should be two and a half times the thickness of the plates, and the pitch of the rivets from center to center should be 7 times, and the overlap of the plates 6 times, their thickness.*

This is the very best rule of which we have any knowledge, and we are indebted for the same to Forney's "Catechism of the Locomotive," which, although not revised for a long time, is still a standard work for locomotive reference.

F. P., Fort Bayard, New Mexico.—The expense incidental to insulating iron box cars would not be justified; in fact, the total cost of the car would be raised to prohibitive figures. All of the experiments to which you refer have been made long ago, and very largely dropped, as it was realized that nothing was to be gained.

CAN a telegraph sounder be worked on a telegraph line (a ground-circuit line) by "bridging in," as in the instance of a telephone, without cutting the wire between two stations?

(2) About what per cent of telegraphers are women?

(3) Do all railroads use the standard rules of the American Railway Association, especially the whistle, air-whistle, and hand signals?

(4) Can the air-brakes be applied on a passenger-train aside from in the cab?—L. E., Garber, Missouri.

(1) The ordinary sounder cannot be worked as indicated, and what is called a "main line" sounder is required. It might be possible to scrape the wire and obtain clean points of contact by bridging, but much better results would be obtained by cutting the line.

(2) There are no reliable statistics for this; but, after looking into the matter from all angles, we are inclined to the opinion that not more than one per cent represents the proportion at present. It appears from what information we can secure that women have been gradually dropping out in this profession during the past ten years.

(3) Yes, practically all of them.

(4) You will note the second cord in any pas-

senger-car generally arranged to run above the top window-frames and connecting with a valve placed in one end of the car. This valve surmounts a vertical pipe which is connected with the brake-pipe. Pulling the cord opens the valve and results in an emergency application of the brakes provided the valve is held open.

E. G., Monroe, Michigan.—We regret that it is impossible to answer either of your interesting questions in the form which they reached us. If you will advise in further detail regarding the electric motor, whether alternating or direct current, etc., etc., it will be quite easy to work it out for you in full. So far as the Mallet articulated compound, which you mention, is concerned, it should develop at least 2,500 horse-power under ideal conditions.

WHAT is the approximate pay of each of the following positions: machinist, roundhouse foreman, master mechanic, and superintendent of motive power?—J. W. K., Taunton, Massachusetts.

Machinist, from 28 cents an hour to 45 cents an hour, dependent on the section of the country and the agreements in vogue between the machinists' associations and the various railroad companies. Roundhouse foremen receive from $100 to $125 per month. Both this position and that of machinist pay more west of the Mississippi River. The salary of a master mechanic, as a rule, is about $200 per month, and it may reach $250 on some roads. Superintendents of motive power receive all the way from $4,800 to $10,000 per year, the position probably runs a longer gamut in compensation than any other in railroad service.

WHAT is the width of space that is required between the tracks of a railroad? I refer to the space between the tracks of a two-track system or a four-track system on the main right-of-way.—D. E. F., New York City.

Strictly speaking, there is no universal standard, but the clearances generally used on trunk lines in this country are 13 feet from center to center of each track, which, with the standard 4-foot 8½-inch gage, would imply 8 feet 3½ inches for the space between the tracks. Some railroads use 12 feet instead of 13 feet, but the latter will be found to apply generally.

WHAT is armored brake-hose?—B. J. B., Cleveland, Ohio.

This is brake-hose covered with a woven-wire fabric to protect it from injury. Another form of armored brake-hose is formed by winding a continuous wire spirally around it by a machine which makes the spiral slightly smaller than the tube, so that it grips tightly. Vacuum brake-hose, for vacuum brakes, is usually lined with coiled wires on the inside to prevent collapsing, but this is not properly termed armored brake-hose.

WHAT is a radial stay?

(2) What is a stay-bolt?

(3) Please give the accepted definition for steam?—W. S., Baltimore.

(1) In many boilers the crown-sheet of the fire-box is supported by a number of rods, or stays, passing through the outside of the fire-box and secured by nuts. These stays are set radially to the curvature of the crown-sheet, hence the name.

(2) A bolt with both ends threaded, used for staying the inner and outer plates of a fire-box. The ordinary stay-bolt is screwed through both plates and its projecting ends are hammered or riveted over the plates. Flexible stay-bolts are used to afford some elasticity between the inner and outer fire-box sheets, whose different rates, or degrees, of expansion, cause numerous breakages of stay-bolts. Hollow stay-bolts are used for admitting air above the fire. It is usual to drill a one-eighth-inch hole to a depth of about three-quarters of an inch in the outer ends of stay-bolts in order to more easily discover a broken stay-bolt by the escape of steam and water.

(3) Steam is the vapor of water formed by its ebullition when heat is imparted to it. The temperature of ebullition, or at which water boils, depends upon the pressure to which it is subjected. At atmospheric pressure the boiling temperature is 212° Fahrenheit; at 10 pounds per square inch it is 338 degrees, and at 200 pounds, 388 degrees. The formation of steam in a locomotive boiler is a physical change caused by the application of heat; but there also occurs a chemical change, due to the same cause, which results in precipitating the mineral salts held in solution in the water when it entered the boiler, and forming a hard crust or scale on the plates and tubes. This scale is a bad conductor of heat, and when it forms on a plate to a thickness of one-eighth of an inch, more coal must be burned to transmit the same amount of heat to the water than before the scale formed, and the fire-box, especially the crown-sheet, is overheated to a dangerous extent.

DOES the forward truck of an engine swing laterally, and does it follow a curve, or do the inside wheels slip in the same manner as a driving-wheel?

(2) Is there any patent on a device to make the headlight follow the track on a curve? Would such a device be of any value provided it was a success?—W. K., Stillwater, Minnesota.

(1) With the exception of a few designs of rigid *trailing* trucks, all engine trucks are made to turn about a central pivot, or to allow for side displacement to enable the locomotive to round sharp curves. In regard to the lateral motion, this is provided for in what is called the engine truck-swing bolster, which is a bolster from which the center plate of the truck is swung or suspended by means of short links hung on pivots or pins. It enables the truck to

oscillate transversely to the center line of the engine, and thereby, more readily adapt itself to the track when running on uneven or curved track. Engine trucks take curves readily in view of their very short rigid wheel-base, there is no "slip" to the wheels of either side, so far as we have observed.

(2) No doubt there are patents covering this, because it has been much talked about as a possible improvement. Such a thing, however, would be of little practical value. The view through a curve is generally broken by the walls of a cut or objects along either side of the permanent way, and over such obstacles a swing headlight would be unavailing.

S. D., Vineland, New Jersey.—An eye test is now generally a requisite for men entering the employ of railroads as telegraph operators; therefore, we cannot quote any road where it is not practised. Please read our reply to "F. A. C.," page 121, June number, which fully answers your query in regard to the working hours for operators under the Hours of Service Act.

M. R. J., Allegheny, Pennsylvania.—You had best dismiss all idea of ever securing the position of division master mechanic without previous experience in the subordinate grades. We fully appreciate that this advice is discouraging after you have completed a college course with that specific end in view, but there is really nothing for you to do but enter the mechanical department of the road of your choice in some subordinate position. The fact that you are a technical man would, no doubt, help considerably in securing promotion, but the main thing to learn is how to handle men, and this can only be learned in the school of practical experience.

J. M. K., New London, Connecticut.—The outer side or rail of a curve is raised so as to carry the center of gravity of the moving object inward, and thus in a measure counteract the impulse to follow the line of least resistance—a straight line. Raising the outside rail counteracts the thrust or push of the thing in motion, converting it from a shearing force into a downward pressure, and does away with the tendency in railroad engines to either ride over the outside rail; turn over the rail itself, break it, or shear the spikes at the ties and push the rail from its position.

W. H. S., Benson, Illinois.—We can add nothing to what has often been said in these columns in regard to the merits or demerits of any correspondence school, because we have no intimate knowledge of the workings of any of them. We know, however, that they all include a thorough drill in the theory of the railroad. This is of unquestioned value, as the time has now arrived in railroading when a man is supposed to know something of what the business is based on. Your height and weight are about right for a brakeman, but your age, twenty-seven years, might possibly be objected to You can readily find out, however, by applying to any railroad in your immediate vicinity, as there is little variation now in requirements all over the country.

WHAT is the quickest and surest method of figuring the horse-power of an engine and a boiler?—R. R. P., Marfa, Texas.

The general formula for ascertaining the horse-power of a locomotive is as follows:

$$\frac{P \times L \times A \times N}{33{,}000} = H.P.$$

In which:

P means effective pressure in pounds per square inch (85 per cent of boiler pressure).

L, length of stroke in feet.

A, area of piston in square inches.

N, number of strokes (four times the number of revolutions) per minute.

H. P., indicated horse-power.

There is another "rule of thumb" that works out pretty well in stationary engine practise, but we would scarcely recommend its employment save in the roughest calculation, viz.: "Square the diameter of the cylinder and divide by four." It is astonishing the closeness of the result so attained with that from the more elaborate and accurate formula given above. A similar rough-and-ready rule for arriving at some conclusion regarding the horse-power of a boiler is to allow 10 square feet of the total heating surface per horse-power.

C. G., New York City.—The tunnel portion of the Pennsylvania Railroad's improvements in New York is under the Hudson River, the city of New York (Manhattan), and under the East River to Long Island, between six and seven miles.

(2) The Pennsylvania is double-tracked between Philadelphia and Washington, District of Columbia, and in many places where congested conditions warrant it is a four-track road. The latter practically prevails over the entire distance from New York to Philadelphia.

(3) Comparisons between the train performance of railroads are generally unfair through the inability to secure full data, hence we hesitate to make any comment on the performance of either eighteen-hour train. The Pennsylvania trains running daily between Jersey City and Chicago in 18 hours, make the 905 miles at the sustained average speed of 50.9 miles per hour, and they were on time at destination, during the year ending June 11, 1906, 328 times out of 365, or 89.8 per cent of the trips of the year westbound, and 85.2 per cent of the trips east-bound. Of the 37 late arrivals at Chicago, 14 were not over 10 minutes late.

The New York Central reported for its trains a somewhat less favorable record; but the Central's fast trains travel at a higher speed, the distance being greater, and the trains are often made up of five, six, or seven cars for a part of the distance.

BUTCH POTEET CAME THE NEAREST, BUT HE STUBBED HIS TOE AND FELL.

SISTER.

BY EMMET F. HARTE.

Honk and Horace Undertake the Practical Education of a Young Person with a College Warble.

HONK lapped up the last odds and ends of repast from a plate sundry times filled, sighed a great sigh of repletion and leaned back, oblivious of the fact that he had egg on his chin and grease on his nose. Honk was not what you'd call an elegant eater, but he obtained good general results.

As a hen is moved to song when the picking is plentiful, so was Honk presently moved to rhapsody.

"Our work comes on apace," he remarked with complacency. "Valhalla, under our wise and far-seeing tutelage, has risen from the gloomy depths of obscurity and taken her appointed place in that bright galaxy, or lexicon, or whatever you're a mind to call it—that resplendent coterie of beautiful, prosperous, and soundly established commonwealths.

"Our work is good. We have came, saw, and conquered, as a noble old empire-builder of some pumpkins in his day once said in a heathen jargon. Pour me one small thimbleful of that Chianti. Your health, Horace! May your girth expand until, balloon-like, you ascend to more majestic heights!"

I bowed my acknowledgments.

"Have another," I said. "And unroll me some pictures of the future; gimme some dope on the high cost of living, and tell me how I'm going to meet my next lodge dues."

Honk waggled his jaw to reply, but did not. Our little sounder awoke at that moment and butted in with a pert "v-e-v-e." We had put in a relay to the medicine-house to save steps—a resonator, on a movable base like a desk telephone, and everything quite presumptuous, right at your elbow.

I cut in before the bloke at the other end got his finger warm.

"Where've you guys been?" he asked. "Been trying to get you for two hours. Why don't you leave your address when you go out of town?"

"Rotten," I lined back. "All the world hates a liar. You've been smoking too many six-bits-a-gross joss-sticks again. Come on with your clack. We're busy in Valhalla."

"Talkee for H. Simpson," he clattered. "Is he there? O. K. Here you are: Archibald T. Manning, Jr., arrives Valhalla Tuesday, reporting to Simpson as pupil and assistant. Letter follows. Signed, A. T. Manning, third vice-president, P. and P. Railway."

Honk heard this with profound gravity. He allowed the tip of his tongue to protrude, as was his habit when thoughtful.

"Well," I said, "say it."

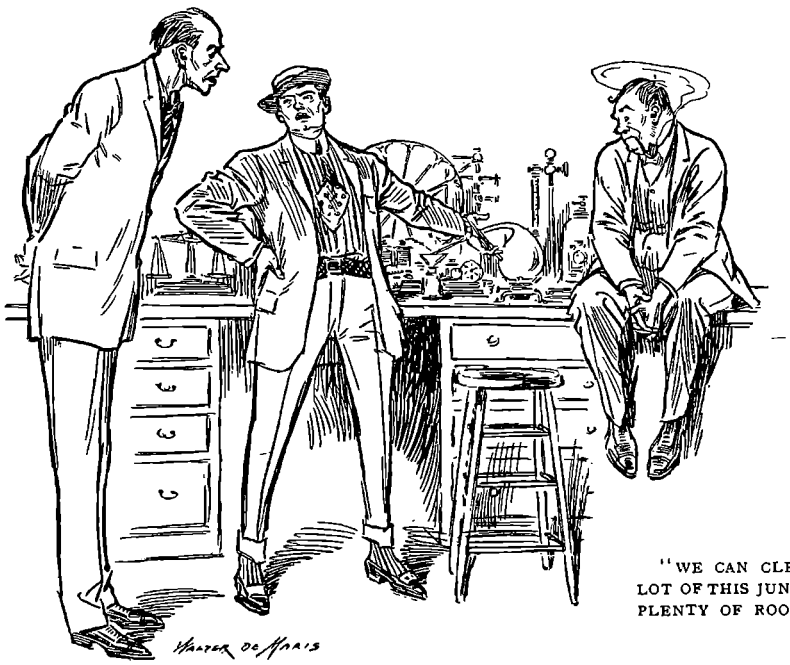
shorn of its husks of wild speculation and idle conjecture, as found in schools. Manning looked the world over with a calmly critical eye; with mature judgment he looked 'em over—"

"How many was there of them?" I inquired expectantly.

"Ptt!" said Honk. "Let it suffice that he decided to send the boy to me. Why? Because I can give him the cream of all the ages, boiled down to tabloid form—"

"I see," I said. "He's to be raised on condensed milk. Watch out that you don't colic him."

"Never mind," he continued. "Don't



"WE CAN CLEAR AWAY A LOT OF THIS JUNK AND MAKE PLENTY OF ROOM."

"Which?" he asked.

"You heard what he said. Old billy-goat Manning is sending his boy out here for us to raise."

"Not *us*, my dear Horace; not *us*. Me, *m-e*, me! I am to take the lad — quite a bright boy, I understand — train him, and make him into a wise and useful man. I've known it for some time. In fact, Manning and I talked the matter over some time ago.

"He wants his son to grow up a credit to his raising; a practical railroad man, sir; a man with a sound scientific education both in theory and practise, sir.

"The youth has had the advantage of a college training; now he wants the actual experience. To get at the kernel, so to speak, worry. And don't go enticing the kid off fishing and make him neglect his work, either. If you do"—he tried to look fierce—"I'll land on you."

To conceal my alarm at his threatening attitude, I turned on the phonograph. Honk hypothecated his spleen for a chew and fell to making a blue-print of an electric crane or a cold-storage plant, or something.

Well, Archibald, junior, arrived all intact, according to bulletin, on the red motor-car Tuesday. He was a typical college candy kid, from the loud, multicolored hat-band on his cute little hat to the stickers on his spray-proof, accident-policy covered trunk. He was, to all intents and purposes, unarmed, and he rode all alone; but his

tie was tied according to league rules, and anarchy flamed in his hosiery.

I noticed, among other things, that he wore a genuine alligator belt and a shirt striped up and down in six audible colors; that he had buckles on his shoes as big as a playing-card, and a watch-fob representing Lou Dillon or some other track-scorcher in the act of eating up a mile.

By that time, Hayes, the con on the motor-car, had wafted him over.

"Simpson, of Valhalla," said Hayes in introduction, "and his coadjutant and aid de campus," meaning me. "Meet my young friend, Manning. Fine boy, men; fine boy. Goes in for athletics; tells me he nipped the world's record for high jumps and flinging the hammer. Well, so long, men; see you later."

Honk looked over our protégé with a critical eye. The array of vivid colors made him blink.

"Welcome to our fair city," he said, offering his hand. "Glad to see you. Ain't we, Horace? We want you to feel right at home. This is a big, free, wide-open country out here; everything goes with us, Archie, my son—" which was as far as he ever did get.

Archie, my son, opened his cylinder-cocks at that juncture and hooked her up to center. From that minute until his heels twinkled over the horizon homeward-bound he never let up talking very long at a time.

"Don't call me Archie," he directed. "Call me Sister. That's my pet name. Got it at college. Zisster! Blister! Siss, boom, ah! Who kills 'em off? Who spills 'em off? Sister! 'Rah! 'Rah! That's me," he said with enthusiasm.

"Nice little village you got here. Got a gym? Where's the White City? Gee, ain't there no trolley-lines? Well, what do you think of that? Where's the ball park? What league is this place in? You ought to be some jumper, on a standing broad; you're built for it. Where's the swimming-pool? I'm all over dirt. I took the class honors for the mile dash last water carnival. Ever play water polo? Gee, I'm hungry!"

That was a sample of Sister's rapid-fire conversation. He was all to the good with the parts of speech.

We bore him in state to the medicine-house, and Honk tried to entertain him with thermostats, amperes, and heat units, while I threw together a short order of "two mortgage-lifters on a raft and a pot of big muddy" to succor his inner works.

I was surprised at the interest Sister took in machinery—not. He displayed the feverish interest of the man with the hoe.

Honk's well-rounded platitudes on what the exact sciences were accomplishing in this day and age to make life worth living struck Sister with a sort of dull thud. He was as responsive to that line of talk as a grader foreman at a Schumann-Heink recital.

"I s'pose you got pretty well along in chemistry," said Honk. "Now, I—"

"Huh?" said Sister. "Naw. I never went to class if I c'd help it. But, sa-ay! D'jew ever see Gotch wrestle? Lor' lumme! Wouldn't I like to travel around with one of them all-champion combinations that take in the big cities every once in a while! Jeff and all of the big fellows!

"Gee! I've got a good arm for my age, don't you think? Know how I got that? Ten minutes with the bells, ten minutes with the clubs, ten minutes with the bag. Haven't you fellows got a punching-bag or nothing? No gloves, either? Not even an exerciser? Well, what do you think of that? Fencing's good. I'll send and get my foils. We can clear away a lot of this junk and make plenty of room."

Junk! That was Sister's characterization of all the delicate machines, the fine, costly apparatus, paraphernalia and what not, whereon and whereof Honk had spent time and money.

Junk! Retorts, crucibles, lenses, batteries, coils, sensitive instruments so finely adjusted, some of them, that they had to be kept in a vacuum—all junk! Men have died ignobly for lesser insults than that in this Western country.

Honk sat, stunned and speechless, while Sister ate and conversed. He praised the cooking, and mentioned that his digestion was perfect. He related the history of his young life and quoted statistics, exhaustive and intimate, gleaned from the annals of athletics, beginning with the ancient heroes of the prize-ring and ending with racing aeroplanes for sweepstakes. He had the data right on tap.

Football and baseball thrilled the harp-strings of Sister's soul. When he wandered verbally into that field, his eyes glistened with the moist glisten of the soul-rapt. He was a devotee. When I agreed with him that the man who knocked a high drive over the right-fielder's head when the bases were full was greater than he that taketh a city, he chose me for his chum.

"What we want to do right away now,"

he said, "is to get busy and organize a team. I'll pitch. You can play short. Lengthy here can hold down the initial pillow. Sa-ay, we won't need no outfield. I'll fan 'em just as fast as they come to bat. Man, I eat 'em, that's all! Chirk up, old Glumsy, why so sober? You ain't broke, is you?"

This last to Honk, who was looking both pained and fatigued.

The time passed jerkily that Tuesday. Sister led the conversation at a long gallop, taking the hurdles with ease. He was a steeplechaser with words. Railroading, engineering, mechanics, or the discussion of arts and sciences, the sordid pursuits of men in winning the world from savagery, he vaulted lightly or side-stepped.

On the other hand, the thought of turning Valhalla into one long athletic tournament caused him to sound the view-halloo. Sister was the original Olympian gamester.

Honk appointed me a committee of one to show Sister around. We went out to the power-house first. While there we signed Butch Poteet for third base.

At the water-works pumping-station we took on two fielders and a catcher. The remainder of the requisite quota, with six for extra emergencies, were acquired here and there—at the cement-mill, from the street-cleaning corps, the mercantile establishments, and the City Hall.

Ere twilight stole shadowy and athrill with bug-music across the far-stretching sweep of the plains he knew many, many citizens by their front names, all the streets, had selected the site for the ball park, matched one of the stokers at the power-house against a brick-molder for a ten-round bout for points at an early date, and had aroused public sentiment to such an extent that they were circulating a petition to buy suits for the ball team.

We returned to the medicine-house, Sister effervescing, and yours truly a bit fagged, considering that he had the task of getting supper staring him in the face, but showing strong and sound of wind.

Honk heard our reports of progress without comment. He couldn't have inserted a word, anyhow, into Sister's solid stream of talk without the use of a hypodermic.

Once, while our garrulous visitor was wetting his dry pipes with a drink of ordinary water, Honk slipped in a remark deftly.

"We'll rise early to-morrow and get our young friend lined up at his work," he said.

"What's that?" asked Sister. "Work? What kind o' work?"

"I thought you could carry a chain for me," said Honk mildly. "I'm going to survey a plat in the west end."

"Won't have time to-morrow," said Sister. "I've got to get the team under practise. Fatty here can help you out, maybe. Every day put in in practise now is that much to the good. To-morrow'll be my busy day, I do reckon. We got to get in shape now in short order if we expect to make a showing."

Honk got out his letter from Manning, senior, and reread it carefully. He looked as if he harbored suspicions of having overlooked a bet or two. Afterward he made a pencil notation—it was useless to attempt an audible comment while Sister was in eruption—and slipped the document to me to peruse. I went out and read the same under an arc-light.

"A bum steer," Honk had annotated. The letter went on to state, in the sparkling, breezy style of a stock-market report, that the consignment submitted was sound, staple, and unadulterated; if unripe, it would mellow readily in time; it was first-class material; all it needed was a few skilful whacks with the chisel, when lo!

There you'd have a masterpiece! It was a chip—off the original chunk, as it were. Manning, senior, took occasion to fling a few bouquets on his own lawn in passing. I suppose for the benefit of the fair one who took the notes. "M. B." was her initials down in the corner.

I agreed with Honk. It was a bum steer. Sister was raw material, all right, and of standard brand; but, as a delver and digger among delvers and diggers, I feared that he might quarrel with his tools. Work? Sister? Alas and ahum! It was even as he had said—he was too busy.

Honk and I seized an opportunity next morning while Sister was unpacking his bats and balls, catching-gloves and other accouterments, to confer about it.

"Why, that old rummy told me that his kid was a regular greedy worm after knowledge; that he made a hobby of mechanical and engineering subjects. He said the young ruffian set him back a tidy sum every month for midnight gas consumed while studying books on electricity, steam-power, and kindred things.

"Ptt! He was reading the sporting news, I bet you. Why, that young barbarian don't know a pin-valve from a monkey-wrench! Make an all-round railroader out of him? Ugh!"

"He's only about nineteen," I said. "Just out of the top-spinning class. What do you want for a nickel?"

"Well, let him go back and put up his ping-pong court and his tiddly-wink table at his pa's, then. I don't want him around here bothering. He talks too much with his mouth," Honk returned with gloomy pessimism.

So Honk washed his hands of Sister; but Sister didn't pine away, for all that. No, sir! He gathered together his ball team and practised them early and late. From red dawn till hen-roost time they clouted the leathern sphere, ran, whooped, made double, triple, and even quadruple plays, stole bases, and developed team work until the far hills reverberated with their din.

Sister showed up three times a day, puffing and sweat-streaked, long enough to throw in a few scoops full of sustenance; then he was off again, gone again.

When he had a few minutes to spare, he organized a track-team, a basket-ball league, and arranged a swimming contest in the reservoir. Evenings he regaled us with the wild, mad, bewildering story of it all.

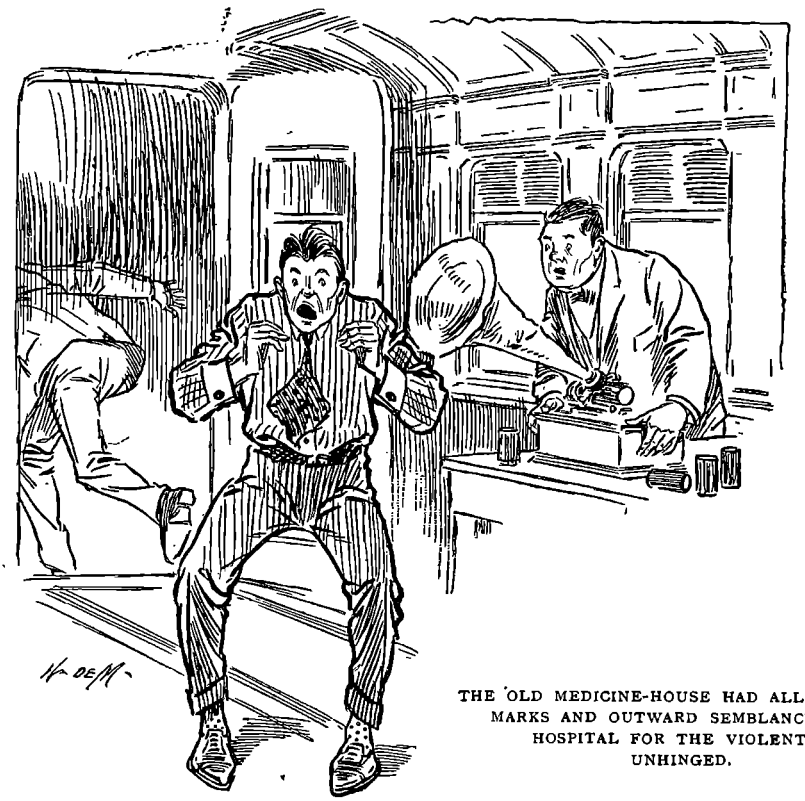
Sometimes for hours this revel lasted. Honk began to wear a hunted look, inasmuch as the phonograph couldn't drown Sister out.

So he wired Manning, *père:*

Your son spends his time playing ball and evading work. Instruct.

The old gent replied:

Won't hurt him a bit. He studies too hard, anyhow. Glad he's taking a little relaxation.



THE OLD MEDICINE-HOUSE HAD ALL THE EARMARKS AND OUTWARD SEMBLANCE OF A HOSPITAL FOR THE VIOLENTLY UNHINGED.

Sister tore out one morning and caught the motor-car for Millardsville by a hundred-yard sprint, just after it pulled out, and Valhalla seemed like a dream till afternoon.

At three-thirty, however, he returned to us all safe and sound, and announced that he had matched a game with the Millardsville aggregation of swatters, to be played on the Valhalla diamond Saturday afternoon, by the grace of a benign Providence and a republican form of government, for a purse of one hundred dollars, winner takes all, world without end! Sa-ay, mister, and what do you think of that?

He got to rehearsing different varieties of college yells and singing topical songs at the

top of his voice after supper, until the old medicine-house had all the earmarks and outward semblance of a hospital for the violently unhinged. Honk finally fled wildly into the night, nor returned until morning. I think he slept out in some remote spot where he could hear himself think.

I saw him for a brief period Friday, the day before the big game. He had an expression of gloom about him.

"Horace," he muttered brokenly, "I'm taking a little trip South to look over the sugar-beet prospects; expect to be away several days. If—I mention it incidentally—if anything should happen to this loud-mouthed young chum of yours, if he ruptures a blood-vessel while attacking some world's record, or gets himself drowned or electrocuted, or blows up, you may reach me by heliograph about nine any evening. Not that I apprehend any such good fortune, but I would like to know it if it should occur."

"What? Not staying for the game?" I asked.

"Nup," he said. "Let chaos reign without me. I have already strangled on my cup of joy and blew a bean up my nose, figuratively."

He borrowed my bicycle and what tobacco I happened to have, and pedaled moodily away.

Saturday came, cloudless, and big with portent; likewise came the Millardsville team and two hundred rooters, profligate of noise and raucous. It was a stubborn struggle. The Millardsvillians had it in for Valhalla.

I couldn't say that I had noticed it before, but it appeared very clearly then that they were frantically jealous of our progress. Valhalla had outstripped them in the race for supremacy, and it stuck in their crops. They came over to belch up the venom of their disgruntledness, as the poet says.

Well, Valhalla turned out freely to see the sacrifice of our neighbors, I'll say that. The mayor declared a half-holiday, and pitched the first ball himself.

Before proceeding further, I may remark that the particular swatter at the bat at that juncture knocked that first ball high and far, and made a home run on it, whereupon two hundred odd voices rose in a clamor of whoops, jeers, and ribald laughter.

Sister pitched the rest of the game. Besides that, he coached. At other and sundry times he wrangled with the umpire, certain members of the opposing team, and, being captain of the home outfit, sassed his own men mercilessly when things went wrong. Things went wrong in disastrous succession.

The Millardsvillians bu'sted the highly elaborated curves of Sister smack in the face, and knocked them in all directions. It was singles, two-baggers, home-scampers, and then, *gr-r-r-wow!* Whee! Whoopee! I never saw a more persistent and irritating set of yellers in my life.

Valhalla got to bat after an interminable time, and lasted until three men could fan. Wow! Wow! It was 4 to 0, 6 to 0, 9 to 0, 17 to 0, 20 to 0—Valhalla holding her own nobly. Sister's team started without a score, and never went back of that.

Nine delirious innings were played, and never once did a Valhalla wigwagger get to first. Butch Poteet came the nearest; but he stubbed his toe and fell, so they put it on him before he got untangled. Sister got so wild at the last that the catcher couldn't reach his balls with a pole. He lost his temper, made overtures to fight his baiters, frothed at the mouth, grew hectic with rage, and had other symptoms of disintegration, all of which was greeted with "Whoop!" "Whoopee!" "Wow!"

"What's he goin' to do now? Look at that one! Roll it across! Whoever told him he could pitch? Oh, mama!" and other compliments.

The visitors lambasted the ball into the outfield and chased in five runs during the ninth, struck out the requisite number of Valhalla's dispirited unfortunates to put them out of business, and the slaughter was finished with a total score of twenty-eight to what the goose hides in the hedge-row.

Pandemonium came down off her perch, accompanied by all her riotous cohorts, and the ear-splitting uproar that resulted would have awakened the inmates of an asylum for the deaf and dumb. They not only smeared on the smartweed, but they insisted on rubbing it in. Of course, the Valhalla backing felt somewhat awearied, especially those who had put up the exchequer.

I knew the weather indications. Gathering clouds, ominous calm, ruffled by intermittent gusts. A hurricane was brewing.

Though I deeply admire a fight—if I have a good seat, well removed from behind a post, and the film is clear and properly shown—I argued it over mentally, and decided to tear myself away. Getting whanged over the coconut with a ball bat looks funny, but it jars on the man that furnishes the coconut.

Well, they got into it all right, just as I expected. I found that I could see and enjoy it far more perfectly from the roof of the medicine-house, aided by Honk's binoculars, than if present at the actual seat of the struggle. There were several rounds, with all the way from one to ten engaged; nothing studied or scientific about it, just loud recrimination, blows, clinching, kicking, biting, butting, and gouging.

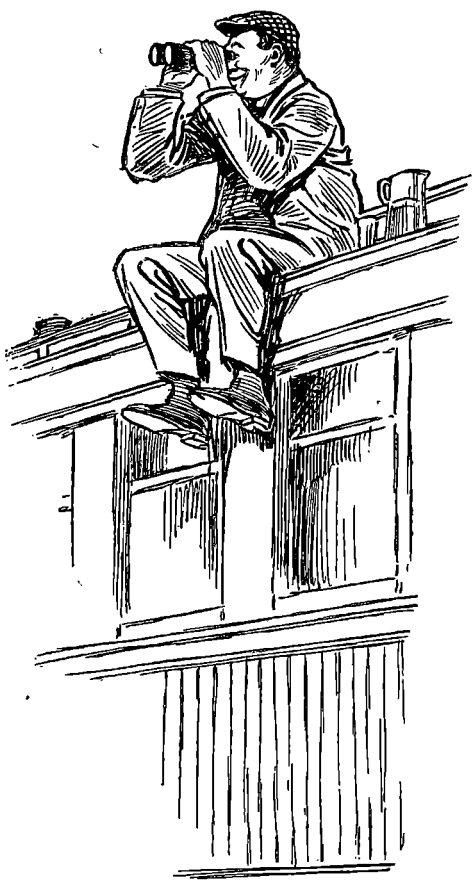
It was the primitive struggle of the young animal, in which the sharpest teeth and the longest claws prevailed. Millardsville, being the least removed from savagery, whipped, of course.

Those farmers fought like they flailed the golden grain, or cleared the forests—by main strength and awkwardness. All differences that admitted of settlement by bloodying noses and blacking eyes being adjusted, the tide of battle ebbed, and the rabble, friend and foe alike, turned its attention to Sister.

Perhaps he lacked that consummate tact and aplomb that comes with age and experience; maybe he failed to say his say in the right tone of voice which the occasion demanded; anyway, the outfit mobbed Sister finally.

They mopped up the ball-grounds with him; they rough-housed him with horny, ruthless hands, tore his new ball-clothes, scratched mystic symbols on his face with finger-nails that had never been properly sterilized, and clawed out snatches of his hair for souvenirs, besides bruising and pummeling him something scandalous to see.

I was on Sister's side throughout; never deserted him for a minute. Others, more indifferent to his fate, and less intrepid of spirit, might have climbed down off that car-roof and dismissed the whole affair with a snap of their fingers, but not me.



I WAS ON SISTER'S SIDE THROUGHOUT.

I watched until they'd pounded Sister into a pulp. I never backed down an inch till it got too dark to see.

Sister limped in soon after sundown. He was contused and battered beyond recognition, but unquenched of soul and filled with a malignity worth paying admission to see. He held a four-hour autopsy, with some stunts in diagnosis, vivisection, post-mortem examination, and free clinic intermingled.

"You saw how I put 'em over, Fatty! You know that catcher we had couldn't catch a cold! And them decisions of that umpire! Waugh! Fatty! Waugh! Why—and then about sixty-five of them pitched onto me.

"I'd have licked every one of 'em, too, if they'd've come one at a time. As it was, they didn't put nothing on me! I guess not!

"Sa-ay, this is the star town for howlers. This is a yellow-dog settlement for true! Can't play ball, can't play nothing! Why—ugh! Ain't you got no kind of liniment? No court-plaster, either? Lookee here where I skinned my knuckles on some Mick's mug. Gee, this town gives me a pain! I wouldn't live here if you'd deed me the whole bloomin' graveyard. Why, this town is dead, and don't know it! Take it away!"

Four hours of that, by the cuckoo-clock, clacked Sister. Didn't annoy me, though. I slept through at least half of it. When it came my regular bedtime I roused up and found him packing his steamer trunk.

"Don't be rushed off," I said, yawning.

"Lor' lumme!" he said. "I ain't. I've stayed a terrible sight longer now in this dump than anybody'd've thought I would. Why, man, sa-ay! Would you think I'd waste very many minutes in this gone-to-seed, noisome, putrid, and sickening hole?

"Well, I don't think! I should hope not! The only reason I ain't on my way, Fatty, is because there ain't nothing moving. You're all right, you and Granddaddy Longlegs; I ain't saying anything against you. But you're easy to please if you stay in this seed-wart of a town."

"Yes," I agreed sleepily. "You're right. This town wouldn't suit you for a permanent home." And I bade him good night.

Sister and his luggage passed outward and onward from Valhalla while the forenoon following was yet young, and no pensive band of admirers saw him off.

He had come like a comet out of the void, tarried in our midst briefly and with some display; now he was receding, slightly disfigured, but possibly not permanently squelched. Oh, no! He would probably break out in a new place, like a pimple that's had a backset.

That night I heliographed Honk to come back from the beet-fields. The canary had squeezed through the wires and flown. He came on foot, trundling the bike, which had suffered a punctured tire, as usual.

No disturbing shadow marred the peaceful serenity of his smiling countenance, however.

"Is he gone for good?" he grinned.

"How cheerful! Wouldn't that start your nose to bleeding from sheer joy?"

A letter we received after an interval from Sister's indulgent father came very near causing a couple of heart-failures though, and that's a fact if I ever stated one.

"AND THEM DECISIONS OF THAT UMPIRE!"

"I take this opportunity of thanking you for what you did for the boy," the old gent had dictated to "M. B." again. "While he was but a short time with you, his genius seemed to need just that slight impetus. The boy inherits his talent, of course; but he seemed to need the stimulating influence of a mechanical environment, such as he found with you. How is that for a neat way of putting it, eh?

"To return to the subject, my son has devoted himself very assiduously to his experimenting, and I have the pleasure of announcing that he has perfected and to-day received his letters patent to an invention for which the world has been waiting breathlessly. I refer to no less a marvel than the wireless telephone—perfect, practicable, and complete—"

"Air! Air!" cried Honk at that point in the letter. "Gimme air! Where am I?" And all that night he tumbled, wheezed, and muttered in his sleep.

Don't shoot the paymaster, he's doing his best.—The Grouches of a Ham.

The Greatest Battle-Ship in the World.

BY ARTHUR B. REEVE.

IN the building of a great battle-ship there are many points of parallel interest to railroad men with the construction of a locomotive. Both are the crowning features of the use of iron and steel as applied to motive force on land and on sea, respectively. Both typify, in their respective spheres, man's utmost in speed and power. Essentially, also, their destinies are linked together, the one guaranteeing the safety of the mighty commerce built up by the other, and, at the same time, dependent on that commerce to originate the wealth that renders its own existence possible.

The Florida and a Hundred Articulated Compound Engines Compared. How the Mighty Commerce Protector Compares with the Commerce Creator.

IMAGINE a monster as heavy as a hundred and two of the famous Southern Pacific Mallet Compounds—No. 4000, which holds the record as the heaviest locomotive in the world. Let this monster be nearly as long as eight Mallets, as wide as ten, as deep as three, as costly as two hundred and twenty—and, then, suppose it floats.

There you have our great battle-ship Florida, which was recently launched at the Brooklyn Navy-Yard, where she was built, the latest word in war-ships, which, for a time at least, will be the most powerful fighting machine afloat on all the seven seas, literally a *super*-super-Dreadnought. Just to get some idea of what she is, here are a few simple comparisons which will appeal to any railroad man:

A railroad engine carries one engineer and one fireman. Here is a great war engine which will carry thirty or more. Altogether, her complement will include officers enough to nearly fill two chair-cars, and the crew would fill fourteen day-coaches, which, altogether, would make a pretty respectable passenger-train.

An average engine carries from twelve to fifteen tons of fuel. The coal to fill the bunkers of this leviathan would be sufficient for considerably over a hundred locomotives. It would require fifty gondolas loaded to their full capacity of 100,000 pounds to transport it. Besides that, this ship will carry four hundred tons of fuel oil, which is about thirty-five times that carried by the largest oil-burning locomotive, No. 4000, which carries 2,800 gallons.

All the new vessels in the navy now have provision for storing oil, and in the future it will be used extensively. In emergency, the oil can be sprayed over the burning coal, but, under ordinary circumstances, the two forms of fuel can be used interchangeably as dictated by supply. Under full steam, the coal consumption will be over eighteen tons an hour.

Just to keep this great machine going for an ordinary piping year of peace will require an expenditure that would suffice to purchase sixty Moguls, or close to a million

dollars. Her coal alone will cost over a dollar a second while she is running.

A broadside fired by the Florida will be nearly half the weight of a steel car, and will cost more than a Pacific type passenger engine with a couple of box cars thrown in incidentally to average things up. To be more exact, a single broadside will weigh nearly 20,000 pounds, and will cost over $20,000.

Each of the big twelve-inch guns weighs almost as much as a Pullman, and is almost as long—fifty tons and fifty feet. These guns will throw a projectile weighing about half a ton twelve miles, with an elevation of twelve degrees, the highest on shipboard.

The muzzle velocity of such a projectile is 2,250 feet a second. One of the highest speeds for a railroad train recorded for a distance is given in the *World* Almanac as 120 miles an hour, two miles a minute. The speed of the projectile is thirteen times as great as that.

When such a weight, traveling at such a speed, strikes something in range, things are likely to happen. In fact, such a projectile will pierce fourteen inches of Krupp steel at 3,000 yards, which is the equivalent of forty-two inches of wrought iron.

One such projectile costs over five hundred dollars. Torpedoes are five times as expensive; and the smaller guns, which can throw hundred-pound shells at the rate of fifteen a minute, cost in proportion. To sum it all up, the Florida can throw twenty-five per cent more than any other ship afloat in a given time—she is a navy in herself.

Yet they are not satisfied with making even twelve-inch guns. Great Britain is building thirteen and one-half inch rifles, and we are experimenting with rifles of fourteen inches.

The Florida's Vitals.

Tucked away down in the hold, protected on every side by the toughest armor made, are the boilers of the Babcock & Wilcox type, feeding ten four-screw Parsons turbines, each turbine having over 40,000 blades. The engines of the Florida are constructed to develop at least 28,000 horse-power.

One of the Erie Mallet compounds, worked to its full capacity, will haul 225 loaded cars of fifty tons each on a level track at fifteen miles an hour. It would then be exerting 4,000 horse-power. The horse-power developed by the engines of the Florida will be equal, at the very least, to seven of these Mallets.

If it were similarly applied to hauling loaded cars, as indicated above, the train would be twelve and a quarter miles long. As the North Dakota, the next largest new ship to the Florida, really developed 35,150 horse-power, or over 10,000 more than was the minimum requirement, it is confidently hoped that the Florida, when she makes her trial trips, will do as well, and perhaps reach 38,000 or more. That would be eighteen times the horse-power of the heaviest of the New York Central's new electric locomotives, which are among the most powerful of their kind.

Her Great Speed.

As for the speed with which this vast mass of steel will travel, it is built to make twenty-one knots an hour, which is the equivalent of about twenty-four miles. But it is expected by the authorities that it will exceed this speed, just as the North Dakota did when she actually developed 22.25 knots. Perhaps the Florida, which is designed to be three knots faster than her predecessor, may develop up to twenty-five knots an hour, which would mean the equivalent of twenty-nine or thirty miles. When one considers that such a great weight is being propelled through a very dense medium—water—the comparison of speed between a battle-ship and a locomotive is not so greatly to the disadvantage of the battle-ship, after all.

These comparisons will add interest to the story of the putting together of such a huge mass of steel and iron as the Florida. It was an undertaking that could have been accomplished at only a very few places in the world. In some respects it was similar to assembling the parts of a great locomotive, though it took over a year to do it, and required a much more expensive plant.

Perhaps the most crucial moment was when this terrific mass slid down her mammoth tracks into the water at the Brooklyn Navy-Yard on May 12. From the very outset, those vital seconds had to be considered.

Nowadays, the launching of a great ship has to be figured out completely, long before a single rivet is driven home, just as the tractive effort and weight on the drivers of a locomotive are known before a dollar is laid out on her. Every contingency must be guarded against, for the sagging of an inch at this critical moment would endanger, if not ruin, the ship.

Therefore, first of all, the ground under the Florida was made as solid as that under a sky-scraper, or the great new terminals of the New York Central or Pennsylvania, in New York. This was accomplished by driving in heavy piling, and the use of plenty of concrete and masonry.

On this base the keel-blocks were laid at intervals of three or four feet, rising at what a railroad man would consider a frightful grade from the water's edge—thirty-five feet in less than six hundred. That brought the bow, which pointed inshore, high up in the air. The keel-plates were laid upon these keel-blocks, together with the parts immediately connected with them, like a great backbone.

Next the giant steel frames and ribs seemingly sprouted out from the keel overnight. It was by adopting this idea from shipbuilding that the new all-steel passenger-cars of the Pennsylvania were evolved, with their backbones and ribs of steel.

Gradually the hull took its form. The air resounded with a rat-tat-tat of pneumatic hammers and the clink of bolts, as strip after strip of steel was hoisted and fitted into place under the direction of the naval constructors.

Forts Within a Fort.

The gigantic traveling cranes, two of them, which carried on this work were operated along an aerial cantilever viaduct in the open air, just as they are in a locomotive or car shop. These great carriers had a hoisting capacity that would enable them to pick up an ordinary locomotive and run away with it, perhaps toss it in the sea at the shore-end of the ship-yard.

To the ribs the binding ties of the bulkheads were riveted—the deck beams, and the various other parts. The heavy, red-painted steel plates of the hull, each lettered and numbered, were swung, one by one, to their appointed positions, sheathing this skeleton in a skin of steel with almost magical quickness.

The tremendous castings—such as the stem that gives shape to the prow, the stern-post which carries the rudder, and the propeller-struts—were lifted into place and riveted. Every one was as carefully tested as the plates that go in to a boiler; they may have to resist an even greater pressure some day when one of those twelve-inch projectiles come in a head-on collision.

Meanwhile, the double bottom was laid, the great bulkheads built up, and the many compartments of the ship constructed. Inside the mass itself, like a tower, each turret foundation rose upward to the level of the deck. Simultaneously, on the ground alongside the ways, the turrets themselves were assembled.

Each of them cost over four hundred thousand dollars—about what would buy two trains of 225 gondolas, hauled each by an articulated compound. A large part of the heavy belts of armor was also placed on the ship before she was launched. As it grew, the framework and the outside plating were held upright by stout shores at innumerable points, each of which bore a part of the enormous dead-weight and relieved the keel of it.

Day after day the great steam crane traveled up and down beside the hull. Men worked their shifts, men of all trades, over a thousand of them. Day after day naval constructors followed every detail on their blue-prints in the prim government offices, checking every minutest detail even to the uttermost of the millions of bolts.

So the ship grew until the vast, incoherent network of plates and beams took on a coherent personality, like that which grows out of the plates and tubes that make a huge locomotive something more than a mere copy of Blue-Print No. So-and-So—and at last we have the Florida.

Here are a few of the figures translated into railroad comparison—just some of the more important, for the whole mass in the naval constructor's office is a book almost as thick as a dictionary and with almost as many pages. No one except the initiated is allowed even a peep into it; for, though you may go down and watch the ship building in the yard, the real and valuable facts are jealously guarded, and you are permitted to copy only certain selected items. That book would be worth thousands of dollars to a rival nation.

This was about all, in the way of facts, that the naval constructor was willing to divulge:

The length of the water-line is 521½ feet—about the length of an engine, tender, and seven day-coaches.

Breadth of load, 88 feet 2½ inches—wide enough for half a dozen railroad tracks.

Mean draft, 28 feet 6 inches, which means that the part under water is high enough for the clearance of three sleepers one above the other.

The ship is being fitted as a flag-ship, and,

among other things, will carry metal furniture.

The normal displacement is 21,825 tons, with a two-thirds full supply of stores and fuel and a full supply of ammunition, or a full load displacement of 23,033 tons—something like the weight of two hundred consolidation engines. Speed, twenty-one knots.

Indicated horse-power of propelling machinery on trial, 28,000 — which will be exactly seven times the horse-power of the new Pennsylvania electric locomotives typified by No. 3998.

Bunker capacity, 2,500 tons of coal and 400 tons of fuel oil, to carry her at ten knots an hour, 61,720 knots in twenty-eighty days —a run which, if by a stretch of imagination you can conceive as being made overland, would mean from New York to Seattle, to San Francisco, and back to New York again, without taking on fuel.

Electricity the Power.

Almost everything except running the ship is done by electricity, the search-light and electrical machinery alone costing $250,000.

Bearing in mind that guns are really nothing but apparatus to propel projectiles, freight carriers, each with its load of explosive to be detonated at the end of its journey, the batteries will consist of:

Main: In turrets, ten twelve-inch breech-loading rifles, costing $65,000 each, and with its mounts, etc., $265,000, equal to nine of the Erie's articulated compounds in cost.

Broadsides: Sixteen five-inch rapid-fire guns, which use up half the price of a flat-car every time they are fired.

Secondary: Four three-pounders, semi-automatic; two one-pounders, semiautomatic; two three-inch field-pieces, and two machine guns.

Torpedo tubes: Two twenty-one-inch, submerged.

In this connection it may be mentioned that the new fourteen-inch gun has a muzzle velocity of 2,800 feet a second, sixteen times the speed of a two-mile-a-minute train.

Armor, eleven inches thick.

Two latticed masts used by range-finders, each worth $15,000, or about the cost of a ten-wheel locomotive.

Two funnels, seventy feet high, about as long as a sleeping-car turned up on end, and with almost as great a diameter.

Boilers: Babcock & Wilcox, with twelve water-tubes.

Turbines: Four-screw, Parsons type, ten in all, six for going ahead and four for going astern. They will make the great nickel-plated propellers revolve 275 times a minute.

Machinery and boilers cost as much as ninety consolidation engines.

Contract price for hull and machinery, $6,000,000. The average cost of locomotives last year was 8.2 cents a pound. The cost per pound of the Florida is twice that.

So much for the figures.

At last came May 12, the day for the launching, the day when the great ship was practically two-thirds done. Everything had been calculated out to a nicety, nothing omitted.

The launching itself was by far the most ticklish piece of work of the whole business, for the larger the ship the more difficult it is to get her into the water. Launching is practically balancing this mass of metal on two broad wooden tracks and sliding it down into the water.

A word will not be amiss comparing the Florida with what the rest of the world can offer. In October, 1905, directly after the Russo-Japanese War, there was a most mysterious show of activity at the British navy-yard at Portsmouth, England. No one could fathom what was doing.

There, hedged in by the utmost secrecy, the keel-plates of a new vessel were being laid. Foreign navies tried their best to discover what the British admiralty was up to. Gradually, week by week, hints and rumors and facts leaked out. Great Britain was applying the lessons of the war.

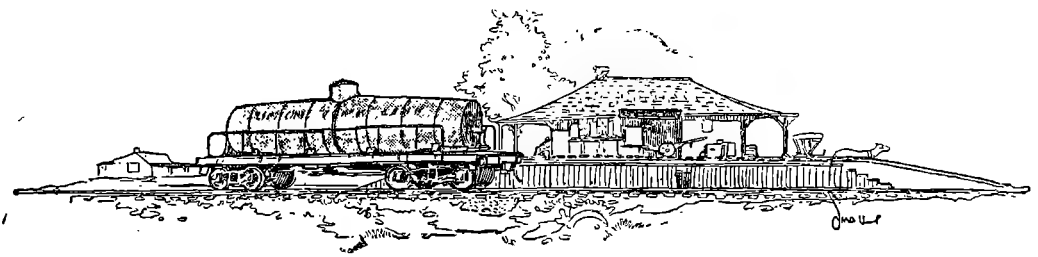
For exactly one year after that date not an important new ship in any navy in the world was begun. The world waited to see what Great Britain would do.

Only the Beginning.

Then, twelve months after the keel was laid, the great Dreadnought slipped into the water, a huge 17,900-ton, all-big-gun battleship.

That was the lesson of the war—strength plus simplicity. At once every nation recognized it. Germany absolutely revolutionized her whole naval policy in a night from complexity to simplicity. France, Japan, all followed.

Nor was America behindhand. We began slowly. The Michigan and South Carolina, of 16,000 tons, were begun in 1906. Then, in 1907, the North Dakota and the Delaware followed, with 20,000 tons. In 1909 we began the Florida and the Utah, of 21,825 tons.



Observations of a Country Station-Agent.

BY J. E. SMITH.

No. 27.—Schwartz Relates Further Troubles, Especially with a Female Poet and a Phonograph, While Trying To Purchase Property for the Right-of-Way.

"WHEN a railroad wants a piece of real estate for some improvement," continued Schwartz, "the price goes up with a whoop. Over at Renner, we wanted to erect a nice passenger-station of stone and brick, with curves, minarets and porte cochère, fancy enough to do us credit and make the town proud. To complete the plans we had to have a house and lot that was on the conrer of a street and the railroad.

It wasn't much of a house, and the owner had had it in the hands of a real-estate shark for sale for a number of years without a buyer. The owner would have sold it any day to John Doe or Richard Roe for a little down and payments to run ten years. He would even have traded it for the semiarid region of Texas.

Some way, in the early formative stage of our plans, the owner got wise that the railroad would want that piece of property for its new passenger-station, and he doubled his figures at once. Thereafter, every morning, the first thing he did after getting out of bed was to add another ten per cent tc the price.

A railroad cannot successfully conduct real-estate transactions openly. Operations are usually in the name of a third person, and the railroad remains unknown until the deal is closed.

Nothing compromises the intelligence of a good citizen so much, or reflects on his native shrewdness so severely, as to sell his property at his own figure, and then wake up to find that a railroad company was the real buyer.

Maud Muller's "might have been" isn't a circumstance to the poignant regrets that rage in the breast of this upright citizen under such conditions.

When he sold to a private citizen, he congratulated himself on a neat deal. When he learned the transfer continued to the railroad, he was buncoed! held up! short-changed! and whipsawed!

He could have gotten double if he had been wise enough! That's a sad reflection, so he kicks himself off the premises.

It isn't the matter of actual values, but of the attitude of the owner.

In the eyes of *hoi polloi,* all railroads are rich and powerful. They not only pay fancy dividends and interest, but their strong boxes are bulging with ducats, and it is the sacred duty of the private citizen to relieve the pressure on the box in every way he can.

Every town wants all the railroad improvements it can get. It takes ground for im-

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provements, and the individual owns the ground. The town boosts and helps along collectively, but the individual doesn't budge.

He has certain conceptions of patriotism and of doing things for the good of the community, but it does not reach his pocketbook, lessen his idea of the value of his private holdings, or his yearning for his country's coin, so he holds tight.

His neighbors call him a "hog" and a "fossil" for blocking an improvement. They argue with him, then they abuse him for his lack of public spirit.

He answers by raising his price another twenty-five per cent.

No matter how valuable the proposed improvement is to the town, or how badly it is wanted, some man must have his price out of it.

This is the reason a railroad must cover up its plans and operate by proxy.

I heard a sad story the other day of how an ungrateful railroad "put one over" on a trusting but thrifty attorney.

It was a case of building a second track, adding some sidings, and widening the right-of-way.

The attorney got into it, in a professional way, that the railroad would have to have a row of lots through his town, some of them improved.

The attorney did some work by proxy. He found the funds, and had his nearest friend buy the lots. Then he put them up to the railroad at a handsome advance.

It was an artistic piece of work, and shows what a prudent man can do to a railroad when he gets a piece of information in advance. But there came an unfortunate hitch. The railroad did not like the figures.

It had another plan it was working out that the attorney did not know of. It made a cut-off east of the town, saved a half-mile of running track, and reduced the grade.

The attorney still holds a row of properties, somewhat dilapidated and ill-kept, abutting the railroad. He is still struggling for money to pay the loan he made to buy them. The railroad will never need them.

The moral is that money should not be invested on advance information of the improvements a railroad is to make, for stuck away in a certain pigeonhole is another plan —and another. So it isn't a dead shot until the last minute, and a wise man will never speculate on anything but a dead shot.

Schwartz's deals with farmers for narrow strips along the right-of-way for the purpose of the second track was a different proposition. There was no secrecy about it. All the farmers concerned knew just what he wanted, and why. So there was no chance for anything only direct bargaining.

Schwartz had one advantage. If he could not close the deal his company could take the land, anyway, under condemnation proceedings. That was the closing argument. Even this was disputed and contested.

But in the miscellaneous assortment of land-owners, Schwartz found some strange characters with peculiar ideas and prejudices.

Schwartz had no time for the fine art of bargaining. The railroad was in a hurry. Construction work was pressing. Contractors were coming on, and it was up to Schwartz to produce the *terra firma* for them to operate on.

It has always been the policy of Schwartz's road to be fair and just in its dealings with all the people living along the line, and it prided itself on the good-will fostered thereby.

Schwartz is a pessimist. He ranged up and down among the railroad's neighbors all summer, in close personal contact, and he has no faith in the friendship and good-will the road had so assiduously cultivated.

"It's like the tail of Halley's comet," said he. "It's diaphanously thin. One cubic mile of it can be packed into a snuff-box."

A few miles out a small farm touches the railroad. It is owned by a widow and her son, now a man of twenty-five. The company wanted a twenty-foot strip of their land.

On a warm day Schwartz drove out to their house.

The son was lying on the grass in the shade of a fine oak-tree in the front yard. He was a pale, anemic young man, with only ten or twelve red corpuscles to the fluid ounce. He had dreamy eyes, a far-away look, and a lifeless indifference to worldly things.

Schwartz extended a cordial greeting. The young man returned it with caution. A dog, with a sniff of suspicion, made a close inspection of the visitor, and seemed to suspend judgment.

Schwartz produced a blue-print and explained the object of his visit. The young man looked it over with about the same interest that a man takes in looking over the asset figures or the mortuary table produced by a life-insurance agent.

"Well, you'll have to see ma," he said at length. "It's just as ma says. But she hasn't any land to sell to the railroad."

With this he relapsed into his former in-

difference, and directed his attention to the farm journal he had laid aside when Schwartz came up.

"She's in the garden."

"Will you call her?"

"You had better go out there where she is if you want to see her."

"Ma" was transplanting cabbage-plants. She was an angular lady of sixty-five, and had a fighting face.

"I ain't got nothing to sell," said she tartly.

"These cabbage-plants have got to be set out to-day because the sign is right, and I haven't any time to waste."

With this she gave an angry poke in the dirt and placed a tiny sprout.

Schwartz stood by, and, as there followed an embarrassing silence, he busied himself making a mental calculation that in six months hence that tiny, wilting sprout would be the half-gallon can of sauerkraut he would buy of his grocer during the Christmas week.

"You see, we've got to have the land," explained Schwartz. "We are double-tracking our line, you know."

The woman transplanted with renewed industry, but made no reply.

"THESE CABBAGE-PLANTS HAVE GOT TO BE SET OUT TO-DAY.

"We can take it, anyhow, by having it condemned by the court, Mrs. Weaver, but we don't want to resort to that."

Schwartz paused, but no response.

"We want to come to an agreement in a friendly way. We do not want to go to court if we can possibly avoid it. There is nothing in it for either of us, Mrs. Weaver, to pay big fees to lawyers and to be hauled around by the sheriff."

With this lugubrious prospect Schwartz rested his case for a moment, but the only effect was to speed the cabbage-planting.

"We want to be fair with you, Mrs. Weaver, and we will pay you more than the land is actually worth. We will build you a good, new fence on the new line, and will look out for the drainage."

The full details of Schwartz's proposition carried him down one row and half-way up the next. He explained and repeated and emphasized, but he never drew a word or a hint.

"I'll come back again, Mrs. Weaver," he said finally. "You think it over a few days, and you can let me know when I return."

Schwartz paused a few moments with the son under the oak, and talked of crops, the weather, and the prospects in general.

"Nice weather we're having," he ventured.

"Yes, sir."

"Still we need a good shower."

A nod of the head.

"We don't have any more real crop failures in this country, do we?"

A negative shake.

"A man who owns a piece of land like yours is well fixed for life," continued Schwartz, with the air of a philosopher.

"Son" neither confirmed nor denied.

"I told your mother I would be back again next week. I asked her to let me have her answer. We must know what we can do. You can talk it over with her. I will see you again. Good-day!"

"Good-day," replied son listlessly.

Schwartz drove away.

A week later, to the moment, he returned.

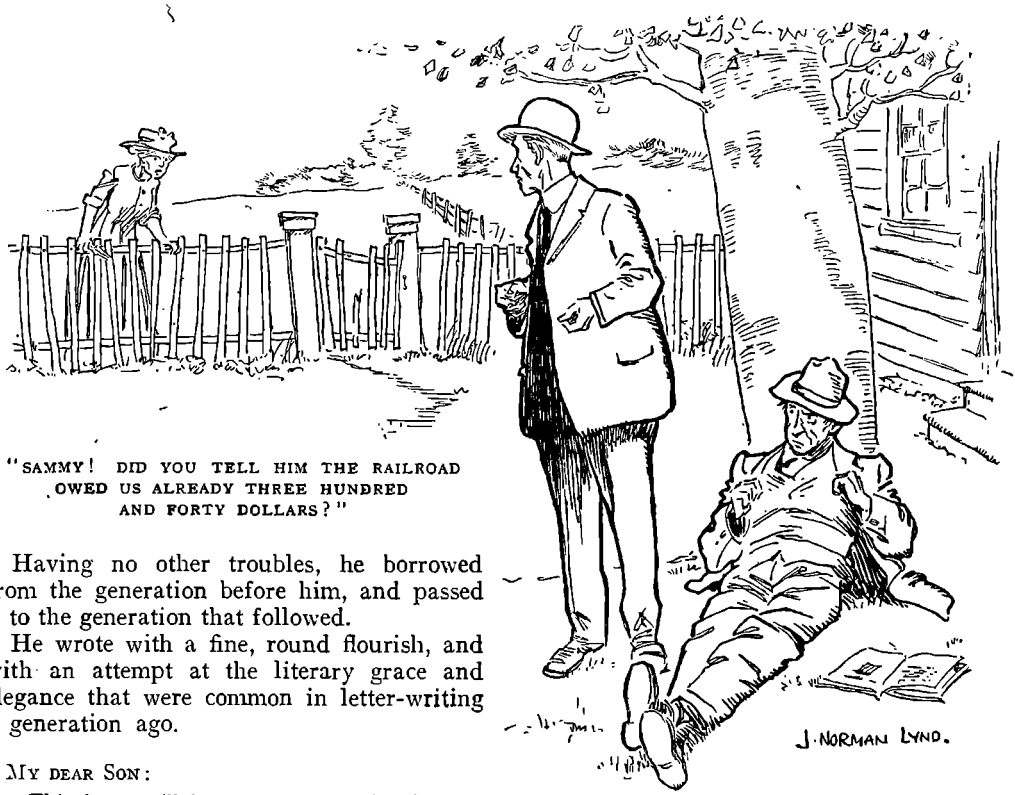
In the meantime, son had gone to the old leather trunk in the attic. He searched among the old papers of deeds and receipts left by his father, who had departed for Canaan's shore some twenty years previous. At length he found the document.

It was written many years ago by the father, and was addressed to the son. It imposed upon the son a sacred injunction.

Among the Kentucky or Tennessee hills, when a father solemnly enjoins his son or sons before the final exit, it is to perpetuate the family feud—to shoot up the McLeods or the Robinsons wherever found or in whatever numbers, and to die with their boots on.

Old man Weaver, on contemplating his final departure, outlined no gory path for his son, nor imposed deeds of violence. He had no grudges against his fellow man, and he should and would have died in peace had not his bosom been rankled by the injustice of the railroad.

IT IMPOSED UPON THE SON A SACRED INJUNCTION.



"SAMMY! DID YOU TELL HIM THE RAILROAD OWED US ALREADY THREE HUNDRED AND FORTY DOLLARS?"

Having no other troubles, he borrowed from the generation before him, and passed it to the generation that followed.

He wrote with a fine, round flourish, and with an attempt at the literary grace and elegance that were common in letter-writing a generation ago.

MY DEAR SON:

This letter will be read by you after I am dead and gone, and am reposing in the silent tomb. I have lived in peace and tranquillity with my neighbors, and I harbor no animosity toward any living man. I never liked Democrats, but I forgive them, one and all. I am imposing on you, my dear son, the task of obtaining justice from the railroad company that passes through our farm. This road was built when my father owned the farm.

The company took a strip one hundred feet wide through his land and never paid him a cent. There were no writings, but there was a verbal agreement which, in the light of justice, I consider to be morally binding on both parties. My father promised to donate this right-of-way if the road was constructed within two years. *But it was two years and three months before it went through.* The road failed in the fulfilment of the stipulations by three months, and the agreement became void.

My father sued them, but they held him off. The road became bankrupt. It changed ownership a number of times. He never got his pay. He left the account to me for collection. I promised him on his dying bed to fight the railroad until it satisfied the obligation.

My son, I have done everything in my power, but I have not succeeded. The railroad resorts to every known obstruction. So, my son, I chronicle this to let you know that I have not, like *Rip Van Winkle,* been sleeping on my rights, but that I am awake to them, and on my death-bed I solemnly abjure you to continue the demand, and, if the opportunity ever comes, to collect one hundred dollars and interest at six per cent.

My son, always contest the railroad's right, and always oppose it in anything it undertakes. With the further injunction that you always vote the Republican ticket, I bid you farewell, my son, until I meet you in the New Jerusalem.

Your loving father,

ISRAEL OBEDIAH WEAVER.

With an almost religious fervor, son committed this to memory, and with filial affection placed upon himself the obligation imposed by the father.

Schwartz returned.

The son was sitting under the same shade, languidly vengeful, and ma was again in the garden, in silent memory of the "gone before" moralizing on the wickedness of the world, and propping up tomato-vines.

Schwartz, the railróad representative, saluted son with a sprightly nod, and a hopeful inquiry about his happiness and welfare.

Son did not seem to enthuse over either, nor did he waste any time in conventional pleasantries nor adorn his proposition with any qualifying persiflage.

"You owe us three hundred and forty dollars right now," he said abruptly.

"Indeed!" exclaimed Schwartz in surprise. "How is that?"

"You never paid for the original right-of-way."

"Why," explained Schwartz, "that wasn't our company—and that was forty years ago. That should have been adjusted by the owner of the land at that time. You see, clearly, we can't open a case of that kind at this late date. Why, we have been in possession, and we have had continuous use for forty years, and that alone establishes our rights."

"We've seen a lawyer," said son. "He tells us our demands are just. We understand that you can condemn and take the twenty-foot strip you want now, and the court will accept the value placed on it by three viewers. Ma and me have talked it over. We have made up our minds. It will cost you five hundred and forty dollars! Understand, we sign no options. When you come along with five hundred and forty, you get your deed for all the land you are using through our farm."

A tall form arose from the soil and leaned over the garden fence.

"Sammy!" she called out shrilly, "did you tell him the railroad owed us already three hundred and forty dollars?"

"Yes, ma."

"Did you tell him we ask five hundred and forty dollars?"

"Yes, ma."

"Not a cent less, either?"

"Yes, ma."

"And we've seen a lawyer, too?"

"Yes, ma."

"And that we don't sign no papers until they come along with the cash?"

"Yes, ma."

She subsided, and resumed her tomato-culture at short range.

"That's all there is to it, sir," said the son, picking up his farm journal and perusing an article on the value of silos.

"My dear sir," said Schwartz, "we cannot possibly entertain a proposition of this kind. It is entirely out of the question. We will have to go to court on this. Does your mother realize they will drag her into court?"

"They will probably let her walk in, won't they?" asked son with apparent innocence.

This nettled Schwartz a little.

"You'll have a case in court all right, and you'll lose money by it. You'll have to pay lawyers and court costs, and, in the end, you will have less than I am prepared to offer you right now, which is two hundred dollars. You don't want any trouble, neither does your aged mother. She is growing old. Think what it means to her to be hauled into court!" Schwartz added this half appealingly.

Again ma's tall form suddenly loomed above the garden fence.

"Sammy," she cried out, "did you tell him we ain't goin' to be bluffed?"

"Yes, ma."

"And that we'll law 'em to—"

"Yes, ma."

Schwartz beat it. There was nothing else to do. After a time he came back again. Each time son confronted him with the same languid doggedness, and ma, from over the garden wall, let fly many sizzling missiles of censure and condemnation of Schwartz, the railroad, and mankind in general outside of the honest farmer.

Schwartz's fighting blood was up. He recommended that the company file action in court at once to condemn.

But the real-estate department, far removed from the taunt and sarcastic reproaches of the cabbage-patch, coolly concluded it would be about as cheap, and make a better title, and be more satisfactory all around, to pay the amount asked, and the road did it.

It was a great victory for Israel Obediah Weaver, deceased, and, no doubt, he twanged his harp quite merrily, and joined in the celestial chorus with lusty exultation.

Son wore his honors in the community with becoming grace, for he had "put one over" on the railroad. Ma's cabbage and tomatoes throve bountifully.

All of which goes to show how things are divinely set and must come about.

While this was pending, Schwartz was actively after other tracts.

Miss Arabella Browning Hoover owned forty acres, and Schwartz's blue-print showed that a twenty-foot strip had to be taken.

A woman landowner is usually a hard proposition to deal with.

Schwartz had misgivings, and foresaw another impossible ultimatum, something like he had gotten from ma and son.

At the gateway, Schwartz stopped long enough to admire the vine-clad neatness that surrounded the modest farmhouse.

The lady that met him at the door wore large, gold glasses, and had her hair combed straight back, revealing a broad expanse of super-thought area.

She was thin, but spiritual—and no longer young.

Schwartz scented a strange and unusual atmosphere. He did not know the nature of it, so he outlined his errand as briefly and directly as possible.

Disappointment overspread the lady's face.

"Oh, you are a railroad man," she said regretfully. "I thought you were a publisher."

"A publisher?" exclaimed Schwartz.

"Perhaps you do not know, you may not have heard; I am a literary lady. You may have read some of my odes, never thinking you would meet the author."

Schwartz began to get his bearings.

"Fiction?"

"Not yet. But I may in time. I have completed a book of verse."

"Who are your publishers?"

"The *Weekly Clarion* printed them for me. I had them print me five hundred copies. It is a collection of twenty-five of my best short poems. Every book has my name, written by myself, on the fly-leaf. I have sold a number fo them to my friends at fifty cents each. Do you think that is too much?"

"I think it is very modest of you," said Schwartz gallantly, "to let them go at fifty cents. Why, all the best sellers are listed at one-fifty. Would you let me look at one, please? I might take it with me."

Schwartz adjusted a pair of spectacles and looked over the paper-backed volume with the eye of a connoisseur.

"I will take this one," said he. "My wife will be delighted. They are farm poems. Railroad men everywhere love to think and dream of the farm. Most of us came from the farm, and a poem that takes us back to the meadow and the barn-yard touches the heart. Indeed it does, Miss Hoover!"

"That is it," exclaimed the authoress, beaming in the ecstasy of full appreciation. "That is what I write about—the common things about the farm. You will be pleased. Take the second poem—there are twenty verses. Let me read it to you." She read with feeling:

"See the frisky spotted calf.
His antics fairly make you laugh—
How merrily he kicks his heels,
Showing how fine and sporty he feels.

"THERE ARE TWENTY VERSES. LET ME READ IT TO YOU."

"Hear the old cow softly moo—
When sun is setting and day is through,
Calling her calfie to her side,
In the dewy eventide."

"Did *you* write that?" exclaimed Schwartz with a sort of startled amazement, and adroitly forestalling the remaining eighteen verses.

"Why, say, James Whitcomb Longfellow couldn't do any better than that. Why, you've got Rudyard Reilly and John Greenleaf Poe backed into a corner and yelping for help."

"Indeed! How figurative! Then you do appreciate poetry."

"I adore it!"

"How divine!"

"Why, when I was only six years old, I could recite that famous poem, beginning, 'The boy stood for the cold—cold deck.'"

"'Casabianca?'"

"That's it. I could say it backward at seven!"

"Isn't that wonderful!"

Schwartz struck a stage attitude. "'So live that when thy summons comes!' That was a long one. I recited that when I was eight."

"What a splendid training!"

"'Quoth the buzzard, Never more!' I got that when I was ten."

"The raven," she corrected mildly.

"Why, of course, to be sure, it was the raven. How stupid of me."

STEEPED HIS SOUL IN MUSIC, JUST AS HE HAD IN POETRY.

"Take number eighteen," continued the authoress:

"It is moonlight on the meadows,
And the mists are hanging low.
The cows are milked, the chores are done,
Soon will come Clarinda's beau.

"A little jokefulness in poetry does not hurt the imagery, do you think?"

"Why, no," agreed Schwartz, "it's just like wine with terrapin."

"My favorite is number twenty-five, 'The Woolly Sheep.'"

"I'll read that one to my wife," Schwartz hurriedly interposed. "Let me see," he went on. "I have two aunties out in Oregon that like poetry, and two nieces in Ohio going to school, and a number of my railroad friends. I think I will buy twenty-five of your books."

The authoress was visibly affected.

Schwartz seized the moment.

"But this little business matter," said he, "this twenty-foot strip of ground the railroad wants. We will allow you seventy-five dollars for it. I have the agreement all written out. You may sign it right there—yes—on that line."

"Arabella Browning Hoover—I sign it in full," she said, and repeating it with evident pride. "I am used to signing it in full in my literary work. All authors do that, you know."

Schwartz paid cash, $12.50, for twenty-five volumes of bucolic rimes, with the author's autograph on each. That went into his expense account, for he got the land dirt cheap.

It was the most flattering appreciation, and the greatest sale the authoress had made. She

was so delighted that the transfer of the real estate was but an incident.

Some retributive justice should compel Schwartz to read the twenty-five poems. On second thought, and weighing to a hair's balance, he should commit them to memory.

Schwartz solved another problem: Where do all the phonographs go?

Schwartz tells me he finds phonographs in almost all the farmhouses; that itinerant pedlers make their monthly rounds to take up, exchange, and distribute the records.

One farmer of whom the railroad wanted a strip of land had just purchased a new hundred-dollar machine, and with it a hundred records.

Schwartz, in a moment of weakness, enthused over it so, for two days he had to be a sort of honored guest, and hear the hundred records through and back.

He steeped his soul in music, just as he had in poetry.

Somewhere in between solos, duets, and full choruses, Lincoln's "Speech at Gettysburg," William Jennings Bryan's "Cross of Gold," the "Ravings of John McCullough," the shrill cries of piccolos, the hoarse notes of saxophones, the rattle of xylophones, to the stirring music of regimental bands, and wailing orchestras, Schwartz succeeded in putting through his real-estate deal, even if he couldn't get the sängerfest sound out of his ears for a week after.

"In that particular neighborhood," said Schwartz, "I was warned by all to look out for 'old Hen Loot.' I was told that I would find him the toughest and ugliest proposition I had ever gone up against. That no one could deal with him without being bluffed and abused, and without losing the greater part of his cuticle. So I put off until the last the disagreeable task of confronting Loot with our proposition.

"I went to him expecting impossible conditions.

"He gave close and respectful attention to my proposals. He outlined the matter the way it appeared to him. Within a half-hour we had come to an understanding and signed an agreement.

"'I have no prejudice against railroads,' said Loot. 'They are necessary to our prosperity. They should be encouraged to improve and develop. It adds to the wealth of every locality.'

"It was the most satisfactory experience I had in that locality.

"Loot had a fine quality of good horse-sense, so the neighborhood couldn't understand him.

"I had encountered the concentrated opposition of three generations of the Weaver family, the pastoral verse of the lone spinster, and the hundred records of the farmer with a phonograph, but there were no frills to Loot. Just business.

"All that bunch that had stood me off, double-crossed and whipsawed me, warned me against Loot.

"Loot is on the square. He knows 'em all with their little knocks and sharp practise, but they can't solve his delivery, that's all. I'm glad I met Loot.

"No, it's not pleasant work buying real estate for the railroad. But we are done this time. If they propose running any more tracks, it's me to the sawmill.

"These stogies are not as good as them you gave me last month. Been saving these for me, eh?"

MOVING AUTOS BY RAIL.

What it Costs Manufacturers Yearly to Deliver Machines and Supplies to Their Customers.

THE railroads of the country are making something out of the automobile business. According to a high authority on the subject the railroads of the United States earn over eight million dollars a year carrying automobiles and automobile supplies.

He declares that an automobile factory pays for ten times as many freight-cars and at a much higher rate than a carriage factory producing an equal number of horse-drawn vehicles, and he estimates that something like one hundred thousand freight-cars leave the automobile factories a year.

The big factories that produce cars in large quantities give the railroads each day, for a large part of the year, enough loaded cars to make up a good-sized freight-train.

Aside from this express companies earn nearly a million dollars a year carrying tires and other factory supplies.

Such is the immensity of this industry, giving traffic to the great transportation companies to the amount of millions, and representing the expenditure of hundreds of millions annually.—*Bloomington Pantagraph.*

ALMOST A MURDERER.

BY GEORGE H. FELLOWS

A Nite Opr., Whose Weakness for Day-Dreams Blighted His Hope of Becoming a Railroad President.

HANSEN would not have impressed the ordinary traveler as a place of very great importance, or business activity, but to the eyes of William Dobbs Anderson, as he alighted from the steps of the Tylerville accommodation, it held peculiar interest. For it was here, according to the directions of White, the chief despatcher, that William's labors for the L. C. and S. were to begin. The little, red-painted station, with its semaphore-pole in front; the barred windows of the gloomy little telegraph-office in the center, with a battered door upon the left.

The latter bore the somewhat impressive inscription of "Waiting Room," and somehow managed to give the casual observer the idea that the inhabitants of Hansen were very impatient in their waiting, and did a great deal of it at the station. There was a water-tank on the other side of the tracks, with its big black spout drawn up at an acute angle, like some immense teapot, and the siding stretched away a half-mile or more to another switch, just in view from where William stood.

All these, with the trains that would pass by in the night, were to be the especial care of William Dobbs Anderson, aged seventeen, a newly graduated telegrapher from a well-known school of telegraphy in his native State, and lately engaged by the L. C. and S. Railroad to fill the position of night-operator at Hansen, a position made vacant by the discharge of an operator who had formed the bad habit of whiling away the long hours of night with the aid of a bottle of whisky.

Behind the station, the dusty street led through the sleepy little cluster of houses, past the general store, the post-office, the blacksmith-shop, and then across a little stream and out into the country.

When White had engaged William Dobbs Anderson to fill the important post of night-operator at Hansen, in spite of many misgivings as to William's ability, none of which William shared, he had said to him, while writing out his pass, "You won't find very much work to do down at Hansen during the night, but remember that what little there is to do is mighty important, and must have your careful attention.

"The company is not paying you to go down there and sleep in the office, nor to entertain your friends with whisky and cigars, and I warn you that any slighting of your duties will bring you harsher penalties than if you had the possible excuses which a busier job might offer. Attend strictly to

your duties, and the company will speedily find something better to offer you as you make good."

All of which had impressed William that the eyes of the whole L. C. and S. Railroad Company, from the president and general manager down, would be continually focused upon him, at Hansen, and that when he had shown them how attentive to his duties he could be, how skilful at the key he was, and what a cool brain and natural knowledge of railroading were his, there would be nothing the company had that would be too good for William Dobbs Anderson.

In his mind's eye, he could picture his future meteoric rise, like great men he had read of, from operator to despatcher, then to the positions of train-master, superintendent, general manager, in quick succession, and finally, in a few years, he would become president of the very road which was now unwittingly buying his time at the rate of $45 a month. It occurred to him, that when he became general manager he would see that the operators were better paid, for had not his professor told him that in the railroad operator was the future railroad magnate? And, of course, he knew. Had he not taught telegraphy to eight or ten of the present-day magnates?

But while awaiting the realization of his dreams, he had formed a virtuous resolution that he would give the strictest attention to his duties, and make a record for himself upon which he would always be proud to look back, when he became president of the L. C. and S. He would show that he was an operator of no ordinary ability, but cool, quick-witted, and skilful as the best. It was a beautiful dream, and had a most inspiring effect upon the dreamer.

The Tylerville accommodation had barely disappeared in a cloud of smoke and dust around the distant curve, leaving William staring about him on the station platform, when a young man appeared in the door of the telegraph office, and stared coolly at the new arrival.

"Hallo, pard. Guess you must be the new owl-trick man, aren't you?" and without waiting for a reply, continued, "Come in and make yourself at home."

Anderson picked up his brand-new suit-case, and walked into the office behind the operator. Charley Williams was a slim, rather undersized young man, who, judging from general appearances, one would consider about twenty-three years of age; but a closer glimpse of his pale face, sharp eyes, thin lips, and hair worn slightly thin in front, left one somewhat in doubt as to his real age. He was known on the road as a good man, and to be depended upon in almost any emergency. An invalid mother had heretofore embodied a reason why William had, on several occasions, refused to take a job a little higher up.

"Well, what do you think of the city?" he asked Anderson when he had seen him seated in the office. "You get a chance to see about all there is of it from the platform. It isn't so large that you have to take a trolley-car or a rubber-neck wagon to see the principal points of interest. Are you going to come on to-night, or do you want to post up first?"

"Mr. White thought I had better take the office to-night," said Anderson, determined not to make friends with Williams too quickly. "I don't expect to have any trouble with it."

"Oh, no, you won't have any trouble. There isn't anything much to do. Just to block your trains and keep awake."

"Well, perhaps I had better find a place to board, then. Can you tell me where I can go?"

Williams gave him directions, and Anderson started out to get settled in his new quarters.

"A ham-factory product, if there ever was one!" was Williams's mental exclamation. "Well, he struck a pretty easy berth to learn in, though, and there may be the makings of an operator in him somewhere. Can't always tell by the looks of a frog. Guess I'll have to put the boys next. Wish I could be around to hear the fun. Maybe I'll come around this evening and see how he hits it off. He may be all right."

When Williams took his last order for No. 5, just before going off duty at six o'clock, he said to the despatcher: "New man on to-night."

"What's his name?"

"Anderson, I understand Don't look much; may deliver the goods, though."

"All right; thanks. I'll watch out for him."

Anderson came in just then, with his lunch, and a look on his face which tried to say, "Oh, well, it's an old story to me. I've been in bigger jobs than this a good many times." But the look didn't deceive Williams any, and he was particularly careful to explain the duties to the new man. The first shock came to him, and confirmed his worst fears, when he said to Anderson, "You'll probably

get a 31 for the down drag about ten; they usually pull in here for water."

"A 31? Do you mean a train order?"

Williams gasped, and stared at him. A man that didn't know one train order from another! "Gee whiz, I pity Davis to-night," he gasped under his breath. Davis was the night-trick despatcher, and a good friend of Williams. Then he went patiently to work and explained what a 31 was and how to take it.

"I may drop in and see how you're getting along, about nine or ten," he said, "but be careful, and don't guess at anything, and hold your trains unless you are sure it's all right to let them go."

"Oh, I'll soon get on to the knack of it," replied Anderson. "Of course, there's some things I don't quite understand yet, but I'm well grounded in first principles."

As Williams walked home to supper he groaned many times. "He's well grounded in first principles. Oh me, oh my! It would be funny enough to make a cow laugh, if it wasn't likely to be serious. Gee, I wouldn't be in Davis's shoes this night for a dollar. Won't the fellows have a circus? Holy gee, he's well grounded in first principles! He'll be blamed lucky if he ain't grounded under six feet of earth before morning, I'm thinking!"

Back in the telegraph office, William Dobbs Anderson was making his début in telegraphy. No. 5 came steaming in, and the conductor, a little man, all nerves, came running into the office.

"Got anything, Budd?"

"Sir?"

"Got any orders for this train? Your block's red."

"Oh, yes. I believe there is an order here for No. 5; is that your train?"

"Well, rather. Leastways it wuz when we left Morrisville."

Anderson failed to recognize this pleasantry, and handed over the 31, tearing it off the pad.

The conductor read it.

"Humph, guess you want our sigs, don't ye?"

"Er—er—oh, yes, please sign it," and he laboriously placed the carbons back under the three copies.

"Now," he thought, "I have to send these in to the despatcher."

He opened the key and hesitatingly struck off "GV—GV—HN."

"I—I, GV," came back quick and clear. Anderson stuttered a little, then said, in a trembling, shaky hand: "These are the signatures for the order for No. 5."

"GA" (go ahead), snapped back the despatcher.

"Burrows, conductor; Brown, engineer."

"Wt no.?" (What number?)

"How?"

"I say, what number is the order?" the despatcher asked, spelling it all out slowly.

"Oh—it's No.—No. 114," Anderson managed to gasp out.

"Wts ur name?" (What's your name?)

"Sir?"

"What's your name?"

William made an interrogation-mark.

"I say—w-h-a-t-s y-o-u-r n-a-m-e?"

"Oh, I didn't understand you. It's William Dobbs Anderson."

"Complete 6.42 P.M. A. S. W. DS," came back the reply, and the wire was still until another man began to report a train.

Nearly every man along the line had been listening to the last of the conversation, and there wasn't many that didn't crack a smile when that answer came, "Oh, I didn't understand you. It's William Dobbs Anderson."

William Dobbs Anderson he was, to all the other men on the wire, from that time forth. There was something in his reply that night that tickled most of the men of the key. An experienced man would have replied in just one word, "Anderson," and would have abbreviated that, if it were in any way possible.

There is a tendency with telegraphers to cut their conversation as short as possible, or rather, to use the least number of words, and to abbreviate the words as much as possible.

To hear a man spell out his conversation has somewhat the same effect as listening to a man who stutters badly. An experienced man gets out of patience waiting for him to say it and get done.

The abbreviations come with experience, and a person who was not used to them would find some difficulty in figuring out what an operator was saying, even if it were written down on paper, if the operator were one who had been in the business eight or ten years.

No. 5 pulled out of Hansen with a puff and a snort, the engine in some way contriving to express the opinion of the conductor and engineer at the extra minute's delay caused by the operator, who didn't know their signatures were needed on a 31 order. "Must be a bran' new 'un," was the comment of Bill Brown, the engineer. "Considerable lack o' sense!"

Back in the office at Hansen, William Dobbs Anderson was soliloquizing to himself: "Awfully rough fellows, these trainmen. But I suppose it's natural. Can't expect them to have the education and refinement of a clerical man, er—operator."

But his thoughts were cut short by a realization that something was going on with the instruments at his elbow. The same repetition of dots and dashes were being clicked off, and, half unconsciously, he began to think of what they might be.

"Funny sending; wonder what it is."

And then suddenly it came to him, "HN —HN—HN, GV; HN—HN—HN, GV."

"Why, that's my call," he gasped, and quickly reached over and answered, "H-N."

"Ty gn et?" (They gone yet?)

"Who is it?" He hadn't the remotest idea what had been said to him or what was wanted. Then followed a meaningless jumble of dots and dashes, an operator's equivalent of, "Oh, blame it all, can't you get nothing?"

Then, slow and clear, "Has number five gone yet? G—V."

"Oh, yes, sir; just gone."

"O. S."

"Sir?"

"Report them."

Anderson had a faint idea that the despatcher was asking for the time they arrived and departed, and this he finally managed to give him, and upon receiving the despatcher's acknowledgment, leaned back with a sigh of relief.

Thus the night passed. A round cursing by a train-crew, who were stopped by his red signal which he had forgotten to change to clear for them, though there was not another train within fifty miles of Hansen, had small dampening effect upon the self-satisfied spirit of William Dobbs. The disrespectful remarks of other operators along the line were more effective, but even these were forgotten when he had left the office in the morning.

"Of course," he soliloquized, "those fellows are rather impudent, but then, of course, they don't know me yet. When I have had an opportunity to show them how easily I can do the work, they will treat me with the proper respect, no doubt."

Two weeks passed, and William Dobbs Anderson still ornamented the office at Hansen during the hours of darkness. His stupendous ignorance of practical telegraphy was being gradually made apparent to him, but, on the other hand, his increasing familiarity of the routine work to be handled during his trick gave him sufficient satisfaction to quiet any fears of his being unable to hold the job.

That evening, Charley Williams had remarked as he left the office: "I hear there will be a special down the line to-night. A party of the president's, going east. Look out for them. You will probably hear all about it on the wire." Williams hardly realized that Anderson could learn scarcely anything from the wire by listening to the talk that went over it. If an operator had something to tell William Dobbs Anderson, it must be told under difficulties.

Therefore, they seldom took the trouble to do it, unless the necessity was great. During the evening William noticed the instruments were making more noise than usual, but his interest did not take him far enough to find out what it was all about. A light drizzle had set in, and the wires were not working very well. Like all beginners at his trade, he had had an inordinate desire to adjust the instrument when he first came to Hansen, but after Williams had come on duty three mornings in succession to find every instrument entirely out of any sensible adjustment, he had cautioned Anderson rather sharply about monkeying with the adjustment. But the weather was fast making them heavy, and Anderson finally ventured to monkey, and succeeded in making it sound much clearer. Just then he heard his call.

"Try 241," he got after asking it to be repeated.

"What do you mean?"

"Which way is 241 open?"

Anderson got the words "241 open," and holding his key open, looked at the wire at his right hand. Then he noticed it was quiet. He tried to adjust that as he had the one upon which he was working. He tried pulling it up, he tried turning it down; he tried the magnets close; he tried them back; but in spite of all his efforts he couldn't make it work.

"Yes, it's open, I guess," he said to himself, and turned to the neglected wire at which the chief was waiting. He had been "adjusting" nearly ten minutes, and the chief's patience, never of the best, was quite exhausted.

"Yes, sir, it's open," said Anderson when he got back to the wire.

What the chief said, where he sat fuming at the key, is not recorded; but it is sufficient to say that even in an office where emphatic language is far more common than any other

style, his was strong enough to make every operator and despatcher look up and grin. They did enjoy seeing old doc get in a rage, as long as they were not the cause of it.

But doc took another grip on himself, and tried again.

"Ground 241 west, say when," he said slowly.

"Sir?"

Again he repeated, slower than before.

"I don't understand!"

"Do you know how to ground a wire?"

"I don't believe I do, but if you will tell—"

"Do you see that strap that runs across the top of your switchboard? Stick a plug in the hole on the left-hand side of the wire marked 241, and say when," was all the chief said, not mentioning what he thought! Business was being held up on the wire to give this green operator a lesson in wire-testing. The president's special was due to leave the terminal in ten minutes, and the despatcher must get a line on things before the special left. Considering which, doc was not in an engaging frame of mind, to say the least!

The wire lay open, and he waited and waited to hear the result of his instructions.

"Which plug shall I take, sir?"

Doc leaned back and groaned. Every one in the office was listening by this time, and the groan had many echoes.

Again he straightened up, and slowly began to tick off:

"Never mind the wire; kindly open the window and say when."

"Now, sir."

"You got it wide open?"

"Yes, sir."

"Then kindly follow my directions: Jump out head first and break your fool neck!" when he closed the key with a snap and leaned back to recover his nerve, while the room echoed with the merriment of the force.

In the meantime, Anderson was recovering what portion of his dignity he might, while he closed the window, and again settled down in his chair to think it over, and plan what he would do when he became president. The instruments chattered away drowsily, the rain fell outside and streamed down the window-pane, and soon William Dobbs Anderson was nodding in his chair. By and by he slumped down on his folded arms on the table and was fast asleep. He had slept some time, when it seemed he was manager of the road, sitting in his office next to the despatcher's room at Grayville. He could hear the instruments as they pounded away. Suddenly it pierced his consciousness that they were calling him, though it did not seem strange that the call had been changed to "HN."

"I wonder what's the matter with those operators, that they don't answer?" he thought.

Still the calling continued. He tried to shout to them to answer up, but try as he might he could not make a sound. Then he jumped to his feet to go out and tell them. The movement woke him, and he found himself back in the station at Hansen. Some one was calling HN steadily and persistently. He reached over and answered up.

"93 coming yet?" was the query.

"No, sir."

"Are you sure they haven't passed?"

"Yes, sir."

"When they come, give them the siding. Be sure you don't let them get away from you. Copy 31, copy 3."

The order followed, directing No. 93, engine 7554, to take siding at Hansen and meet first No. 12, and wait at Marion till 12.22 A.M. for second No. 12. Anderson repeated and got his "O. K." He noticed the other order was directed to first No. 12 at Madison, the first station west of Hansen, a distance of about twelve miles. After the order was finished the despatcher called him again, and said:

"First No. 12 is regular train; they are making schedule time to keep out of the way of president's special—that's second 12. Get 93 in quick so's not to stop first 12."

"O. K."

Then he peered out the window again to see if there were any sign of No. 93. It was black as ink. He picked up his lantern, got up, and put on his coat to be ready to run out and open the switch when No. 93 should show up around the curve. Then he waited.

Five minutes passed.

"Lucky I woke when I did, to get that order," he thought.

Then an awful thought occurred to him!

Suppose 93 had passed while he slept! First 12 had already left Madison, he knew. The despatcher had said it was the regular train. Regular No. 12 was the fast midnight passenger going east. It usually had a day-coach and two sleepers, besides the smoking-car and two baggage-cars. Probably a hundred people were on it to-night!

He dashed out the door and peered up the track toward Madison, trying to see the tail-lights that must have passed fifteen minutes ago, if his fears were not groundless. Then

he hurried down the track to see if, by any good fortune, it was perhaps coming, even then. But no light showed through the falling rain in either direction.

Back to the key he rushed. Perhaps he could yet stop first 12 at Madison. He would confess everything. He would admit he had been asleep on duty. He would tell them anything if only he could stop that train; if only he would not have on his conscience that awful crime—the crime of having brought death to hundreds of innocent men, women, and children! Oh, the agony of it!

His eyes were bulging with terror, the sweat was streaming down his face, and his hand was trembling violently as he dived for the key.

But stop—his call—perhaps it was not so after all! Perhaps 93 had stopped up the road.

"W says 93 left at 11.05; you sure they haven't got by you? Are they there?"

"Not here, don't see them; might have got by. I was asle—" he managed to stutter out with his trembling hand.

But the train-despatcher had snatched the wire away from him and was calling "MN" like mad, and in the despatcher's office there were oaths and hoarse cries!

"MN—MN—MN."

"I—I MN."

"First 12."

"D. 11.32 MN."

"Out of sight?"

"Es 'r."

The wire went open as the nerveless hand of the despatcher fell from the key, and his body slumped downward to the floor.

Anderson, his faculties sharpened by the terror he felt, had understood from the rapid conversation of the despatcher and the man at Madison that first 12 had gone. And 93 had gone! They would come together! Nothing but a miracle could save them, and miracles did not happen in his day. They would smash together. He could hear the awful grinding, roaring crash of it! The cries of the men! The agonized shrieks of the women! The piteous wailing of little children! Oh, God! He, William Dobbs Anderson, had done it. Murderer! The feeling of the hunted took possession of him. He dashed through the open door and ran. He knew not where, but ran blindly, madly, desperately on. Anywhere, to hide from the sight of God and man. Murderer!

Had he waited a moment more he would have heard the key close as the operator in the despatcher's office jumped to his assistance. He would have heard MN call the despatcher and report:

"Tail-lights showing up; they are backing up here; will run them in.—MN."

A long stretch of straight track the other side of Madison, a kind Providence that brought the two trains to either end of this stretch of track at the same time, two watchful and efficient engineers, who saw each other's headlight in time to bring his train to a standstill—these had saved the soul of William Dobbs Anderson from the verdict of murder.

NEW CLEVELAND TO BUFFALO RECORD.

Second Section of Twentieth Century Limited Makes Lake Shore Run of 182 Miles in 159 Minutes.

THE long-mooted question as to whether the distance between *New York and Chicago by rail could be covered in sixteen hours* seems in a fair way toward solution.

Engine No. 4800, with combination-car, two sleepers, and one buffet-car, left Cleveland over the Lake Shore last month at 9.10 o'clock (thirty minutes late) and arrived at Buffalo Creek at 11.49 P.M., making the run of 182 miles in 159 minutes.

Considering the conditions of the run this time is by far the best yet recorded. At two points along the route the work of track-raising is in progress, and at other places culverts are being built. A speed of fifteen miles an hour was made through the Ashtabula crossover; also at Erie, while over the Derby culvert the speed had to be thirty-five miles an hour. The two sections of this train from St. Louis and Cincinnati come together at Cleveland. The second section's remarkable run of much less than a mile a minute, notwithstanding slow-downs, would seem to demonstrate the possibility of a sixteen-hour run from New York to Chicago, provided the track is in good shape.

With road-bed completed and in good shape the time between Cleveland and Buffalo may eventually be reduced to 150 minutes.

If this can be equaled on the other divisions a sixteen-hour run from New York is as good as assured.

Engine No. 4800 was in charge of Conductor John Welch, with Engineer John J. Keefe at the throttle, and L. J. Stonefield as fireman.

Told in the Roundhouse.

BY WALTER GARDNER SEAVER.

LOOKING death in the face without batting an eye is a task which has fallen to the lot of more than one railroad man. Many are the stories of hair-raising episodes that have gone the rounds from one division to another until they are finally forgotten in the routine of the day's work.

What the layman calls bravery, fearlessness, and heroism, the followers of the rail are inclined to define as cool, clean-cut nerve. The man who hesitates, stops to think, or draws back out of the path of danger when duty calls him is—well, he isn't in our class.

While some of Mr. Seaver's tales go to show that discretion is the better part of valor, there are plenty of incidents where nothing short of that don't-care-a-whoop-what-happens spirit could have kept the eagle eye from giving her the big hole.

Blood-Tingling Experiences of Railroad Men Who Calmly Threw the Dice with Death, and Won or Lost with All the Calmness of Their Calling.

"HERE comes old Watson. I say, Watson, you can put up your dinner-can. No. 17 is abandoned, so that you are out this trip, anyhow."

"Well, don't know as I care much. A rest is pleasant, sometimes."

"Come over here and light up that dinky little pipe and be sociable. We were talking about exhibitions of clean-cut nerve.

"As far as exhibitions of nerve are concerned, there is not an engine turns a wheel or a train crew that starts out on a run that doesn't show samples of nerve most any day. There's no use in a man lying down and crying because he's up against it. If he has piled them up there's no use in his pulling his hair, and crying, 'Me che-ild, me che-ild,' like some of these biscuit-shooter actorinas. He is up against it, and that's all there is to it.

"I see in one of the papers an account of where a brave engineer went down to death in his engine to save the passengers when he could have saved himself.

"More fool he. The man who is fool enough to stick to an engine when he can save himself by jumping has no business pulling the throttle. After he has shut her off and put on the air he has done all he can, and after that he is simply committing suicide if he don't go overboard while he has a chance.

Leaping for Life.

"Why, I knew a case on one of the Western roads where, by a despatcher's mistake, No. 2, passenger north bound, got orders to meet No. 11, freight south bound at a station that we will call Larkin, while No. 11 got orders to meet No. 2 at Stevens, six miles farther south. As a result the two met half-way between the stations and fortunately on a two-mile tangent. No. 2 was the fast mail and 11 was a fast freight and the two were getting over the iron pretty fast.

"Billy Hawkins was the eagle-eye who was pulling No. 2 and as 11 swung into the tangent ahead of him he knew they were bound to mix. Now when an express running forty-five miles an hour meets a freight running

thirty-five miles an hour on a two-mile tangent there is not much time to ask questions.

"Billy threw her over, slammed on the air, yelled to his fireman and went out the gangway without stopping to catch the hand rail. He hit the ground, rolling. Charlie Grey, who was pulling the freight saw No. 2 about the same time, so he threw her over, slammed on the air and tumbled overboard without waiting to pick a soft place to light.

"The engines came together, jammed in their front ends, threw their headlights clear of the right of way and made a considerable fuss. The passenger-engine being a ten-wheeler tried to mount and ride the big consul. Neither engine was very badly damaged. Their front ends were smashed in clear back to the flue sheet, but the saddles were not hurt.

"The express messenger and the postal clerk were shaken up and bruised somewhat, but when they heard Billy squeal they knew there was something doing, and each of them jumped and caught the hand-rail in their cars and swung clear, while boxes and other stuff was being shot around over the floor.

"Nobody was hurt, both enginemen had done all that mortal men could do to avert the danger, and when they went overboard they acted like sensible men. There are instances where a man has no time or opportunity to jump; the engineman's first instinct is to do all in his power to save his train and then look out for himself. To see another train coming at you as fast as it can drive, and you coolly sit there, throw her over and put on your air, requires cool, hard nerve, when you know that every second counts and that by putting on your air you may be losing your last chance to come clear, yet I don't know a runner anywhere that is not just that kind of a fellow. But there's few of them that would be fool enough to stay on an engine one second after he had done all that he could, and knew that no power on earth could prevent them getting together. What good does it do a man to have the newspapers print columns about his bravery when he is dead and gone?

"There is another instance of cool, hard nerve that I heard of, where an engineman coolly and deliberately took the chances of an almost certain smash, yet escaped without damaging a hair. It was on the Kansas City Southwestern. The Latham Construction Company was building the road from Beaumont to Arkansas City. At Beaumont connection was made with the Frisco.

Over a Tricky Track.

"Latham, the original contractor who formed the construction company bearing his name, was a good contractor and a good builder, but he was not an engineer. The

"WITHOUT WAITING, TO PICK A SOFT PLACE."

company had a chief engineer who was an Englishman. Latham had called for cross-sections, but the engineer said that cross-sectioning was a useless expense; that all that was necessary in railroad building was to 'cut off the 'ills and fill up the 'oles.'

"So the location stakes were marked with the amount of cut or fill and the subcontractors turned loose. The specifications provided that the waste from the cuts should be drawn out and used as far as might be possible to make the fills, and that no material should be borrowed, unless it was absolutely unavoidable.

"Well, that grade was a sight for gods and men. At the foot of the hill the earth was drawn out of the cut and piled up until the crown was in some places twenty-four feet wide, while in the middle of the fill the crown was not more than ten feet in width. At one place, where the fill was rather a long one, the crown in the center was less than eight feet wide, so that the ends of the ties, when the track was laid, extended over the edge of the bank.

"For some reason that I do not know, Latham got up against it good and proper financially, and he had some twenty miles of track down and no money to go farther. So he made a dicker with the Frisco, and they finally agreed to take over the line and complete it to Arkansas City.

"They sent a man out to inspect the work, and Latham had an engine and car ready to meet the fellow at Beaumont and take him over the work. Now Latham knew that if the engineer saw this particular fill he would condemn the work, and that meant good-by to the deal. So he took Frank Randall, the engineer, to one side and told him what he was up against and said that when he got to that fill he would contrive to attract the engineer's attention to something inside the car, and that when he struck that place he wanted him to go over it as fast as he dared. Well, Randall was a reckless kind of a devil and for that reason could not hold down a regular run on any of the old roads.

"He knew that if he hit that piece of track, which was on a new fill and not yet surfaced, with any sort of speed he would go in the ditch as sure as a gun. They started out, and for the first few miles it was all right. Then Latham, when he saw that he was nearing this fill, called the engineer's attention to some blue prints, and the engineer, thinking that he would see this portion of the track on his return, gave his attention to the prints.

"Frank pulled her wide open and sailed across that fill as though he had a solid rock-ballasted track under him. He expected every minute that the track would slip and pile them all down the bank, but he sat there just as unconcerned as though he was standing on a siding.

"Luck was with him, and they swung around the curve into a cut and he shut her off. When they got to the front, Latham kept the engineer busy looking at material, plans, etc., until dark, and then they started back to Beaumont. The deal was consummated, the road transferred, and Latham went ahead with his work; the first thing he did being to get the work-train out and widen that bank.

"After that no grading was done without cross-sectioning, and when the road was completed it was up to the average of Western roads. Randall said that he wouldn't make a run like that again for any man on earth.

No Money for the Men.

"I heard of another case of nerve, which, while it was not an engineman this time, was as much a case of cool, hard nervy work as I ever heard of.

"A little road out in Kansas was being built, and they had fifty miles of grading done, the bridges in, and about twenty-five or perhaps thirty miles of track down. For some reason, probably the fault of the underwriters, the supply of money suddenly ceased and left the company with this piece of road, several hundred men with two or three months' pay due them and general dissatisfaction all along the line.

"When the superintendent was advised that there was no money available, and none in sight, it was up to him to do something. It was all very well for fellows in Kansas City and Chicago to instruct him to stop the work until the funds were available, but they did not have to confront an angry mob of the toughest men on earth who were not only bad medicine on general principles, but who had a considerable show of right on their side to justify any overt action that might take place.

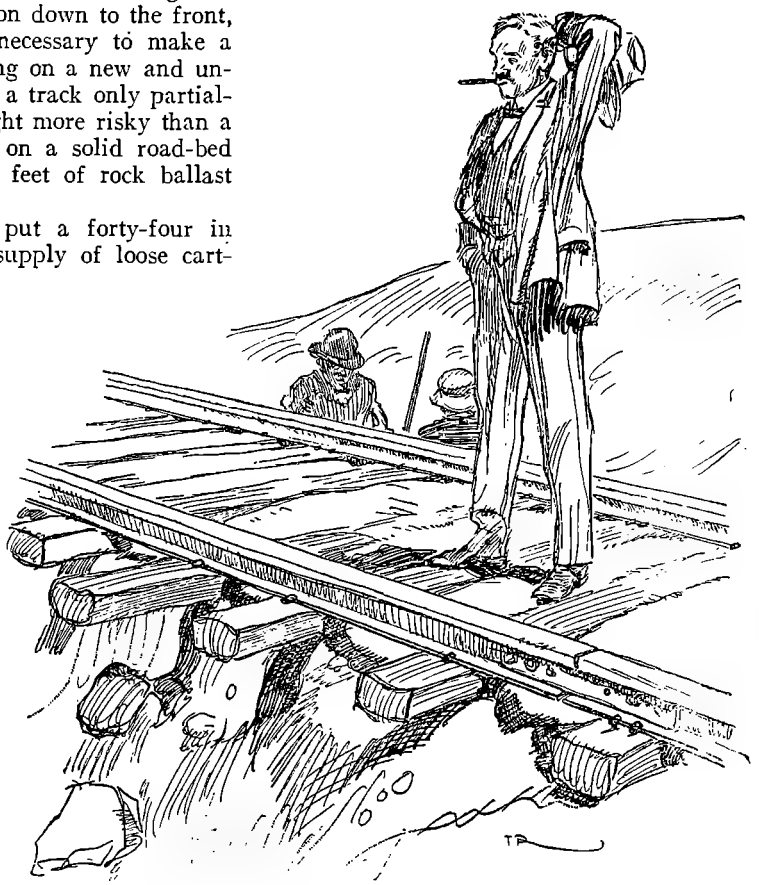
"There was nothing for it but to tell the men that there was no money for them and that he did not know when there would be, and that he had been ordered to stop the work until money should be forthcoming.

"The superintendent was a young fellow, not long out of school, but he was just as cool and nervy as they make them. He or-

dered out an engine and told the engineer to run in the back motion down to the front, and that it might be necessary to make a run for it. Fast running on a new and unsettled road-bed and on a track only partially surfaced is a vast sight more risky than a mile-a-minute schedule on a solid road-bed with track laid in two feet of rock ballast thoroughly tamped.

"The young fellow put a forty-four in his side-pocket and a supply of loose cartridges in the other side-pocket of his coat, and they went to the front. Here the superintendent took his stand with his back against a box car that was used as a cooking-house and called the men up. He told them briefly that the company was at a standstill for the time being, owing to financial complications, that there was no money available for their wages, and he did not know when there would be.

"The engineer backed his engine two hundred feet down a piece of track that had only been spiked at ends and centers. In doing so he was acting against the superintendent's instructions, but he saw the temper of the gang and he meant to be just as close to the nervy young fellow, who stood leaning against the side of that box car, as he could get, so that if it came to a mix-up, the engine would be in easy access.



"THAT MEANT GOOD-BY TO THE DEAL.

"For a moment there was silence, then a muttering began which increased to a roar, and some shouted to lynch the super.

A Little Straight Talk.

"'Hold on there, men,' said the superintendent, "don't tear your shirts. You are not going to do any lynching, for you are too darned cowardly; and, besides, you know that every man jack of you would be hunted down to the death. Furthermore some of you will go to the happy hunting-grounds before you get me.

"'I am not responsible for the company's failure to provide the money. My wages are due as well as yours, but I am here to build this road and to carry out orders. I intend to build this road; I intend to carry out orders. You can go ahead with the work and trust to the future for your pay or you can stop work now, just as you choose. Any man that wants his time-check can have it.'

"A few men yelled to rush him, but the majority were silent.

"'Come, men,' he said, 'I want to know what you intend to do. I am going back very shortly. I am here to give time-checks to such as want them. You may be able to get them discounted in the neighborhood; I don't know. I am going to shove this work ahead if I have to wait six months for the money. You will all get every dollar that is coming to you, but I can't say when.'

"'I'll take my pay out of your hide,' one brawny Irishman yelled and started for the young fellow. Without moving or in the least changing his careless, lounging position

beside the car he shot through his pocket, the ball striking the fellow in the left shoulder, turning him half around, and the engineer told me that he had never in his life seen such a silly expression on a man's face as came over that of the Irishman.

"With the crack of the shot, pandemonium seemed to have broken loose. Many think they are. We can hold the gangways against the whole gang.'

"The superintendent saw that the engineer was wise in his day and generation, and, thanking him, he said that he would not have thought of the engine being the best place for him to stand off the mob, and besides if it became necessary they could pull

I'LL TAKE MY PAY OUT OF YOUR HIDE!"

of the terriers were for rushing the young fellow, but the majority were against it. In the meantime the engineer swung out of the gangway and got the superintendent by the collar of his coat and actually swung him bodily on to the engine. He told me afterward that he couldn't do it again to save his life.

"The superintendent turned toward him rather angrily, when the engineman said:

"'It's all right for you to stand down there in front of that mob with your back to a car, but I am in this scrap, too, and I want you here on the deck of this engine, and if they can take you off they are better than I out at any time and leave the hoboes to chew the rag as long as they had a desire to.

"The mob made another rush, but the superintendent saw that out of over two hundred men there were only fifteen or twenty who made the rush, and he scanned their faces closely so that he could identify them later.

"Then he stepped to the left gangway and called the time-keeper.

"'Tom,' he said, 'hand me up your time-books.'

"Tom did so.

"'Now, men, all who want their time-checks sing out their names. But remember

that when I give you this time-check it is your discharge from the work.'

"'To perdition with the work; we want our money,' yelled some.

"'I told you that I had no money and that I did not know when I would have. I will give all who want them time-checks, which will be cashed as soon as the company has the money. More than this I cannot do. Sing out now, I won't stay here all day.'

"Slowly a dozen men came up and got their time-checks.

Establishing Credit.

"'Now you fellows that have got your time, clear out—vamoose; and don't let me catch you on the work again. Now you fellows that want to, stay with the work. I don't think it advisable to resume work until I have further advices, but you will have your chuck just the same, and during the time that you are not working I will have the boarding boss charge your bills to the company and not against you. So you will only be out a few days, which you can spend in hunting and fishing and resting up.'

"The men cheered at this, and one of them, the boss track-layer, stepped forward and said:

"'See here, Mr. Franklin, if you will give us your word that you will see us paid in full we will go ahead with the work as long as the material lasts.'

"'I tell you, O'Brien, that I do not know any more than you do when the company will succeed in raising funds. It may be next week; it may be three months. But I will pledge you my word that as soon as the funds are available you will get every dollar of your pay.'

"'See here, byes,' said O'Brien, turning to the crowd, 'what differ is it to us when we get our money, so be as we gets it. If yez were paid eviry mont' yez would only blow it in; yez can have a bigger blow-out wit' t'ree mont's pay than only wan.'

"This was a new view of the case, and it appealed to the most of them with force. O'Brien mixed with the crowd a little while and then he came back to Franklin and said:

"'The byes have decided to go ahead wid de work and want you to keep their money till they call for it; but they won't trust the company.'

"'Very well, I will hold all the wages as soon as I get money until you call for it.'

"Well, sir, that fellow Franklin went ahead and kept the work going. He rustled among the local dealers and the farmers for supplies and provisions so he kept the commissary supplied; though in buying on credit, and uncertain credit at that, he had to pay at least twenty-five per cent more than the value of the stuff. But he went ahead, shoving the road right along, and the little combination that had been worked to freeze out and squelch the enterprise failed because a young fellow stood up before a mob of hoboes and defied them, and by sheer nerve compelled them to go ahead because of their admiration for his sand.

"The engineer told me that it was the nerviest piece of work that he ever saw, and for the first hour he would not have given a lead nickel for the lives of either of them.

"I was told of a case that for cool, calm nerve went a little ahead of anything that I have heard of for some time. My informant did not give the name of the road or the engineer, and I did not ask it. It was on a line up in Minnesota, Michigan, or Wisconsin; at any rate it was in the pine lumber country.

A Relief Expedition.

"Word came that a fire was raging in the forest and that a camp of lumbermen, which was reached by a logging road, was in danger of being swallowed by the fire and that the men had no way of escape, for the logging locomotive had broken down.

"This young fellow was handling a work-train and was on the siding at the station where the logging road connected with the railroad. He said that he was going after the men and asked for some one to volunteer to run out after them. As the forest was on fire between the station and the camp they would have to run the gantlet. Only one man volunteered to go with him, and that was his fireman.

"They cut out a couple of boxes and started at full speed for the camp. Now a logging road is not built with any view to speed, and in many places one had to run very carefully to avoid being ditched.

"But this couple did not wait to consider the condition of the road. They went bumping and thumping along and in an hour had reached the camp. The road was yet free of the fire when they went in, but it was sweeping down rapidly and there was no time to lose.

"The lumbermen tumbled into the box cars without attempting to save anything. All they cared for was to get out of there.

The engine and cars were turned on the wye, and in fifteen minutes after he had reached the camp they had started back.

"On the return they found that the fire had swept up to the logging road and was then crossing it, and for at least a quarter of a mile they would have to run through a veritable tunnel of fire. The engineer and firemen dipped their coats into the tank and saturated them thoroughly, and also wet some gunny-sacks that they had picked up at the logging camp, which they wrapped around their heads, leaving only a narrow opening for their eyes.

Blazes on Both Sides.

"All this time the engine was darting ahead and coming nearer to the fire which was raging like a furnace. The engineer hooked her down in the corner and pulled her wide open. At this point the track was exceedingly rough, and there were nine chances out of ten that the engine would climb the rails and turn over, but they took that chance. It was a case of death either way, and they concluded they had rather die quickly in a smash-up than to be roasted.

"He caught a glimpse of the road occasionally as the wind would sweep the flames aside for an instant, and he saw that in some places the ties were burning. He and the fireman wrapped the gunny-sacks more closely about their faces, covering even their eyes, and both crouched down on the deck behind the boiler-head, leaving the engine to drive ahead into the mass of fire and keep the rails or go into the ditch; it was all the same, for they could not avert the derailment if it should occur, and their only chance was for a dash through the blazing trees.

"The engine rocked and bounced, and they thought on two different occasions that they felt the thump of the drivers on the ties, but in a few moments a breath of cool air blew on them, and, unwrapping their eyes enough to peep out, they saw that the train had run through the strip of blazing forest and was now ahead of the fire.

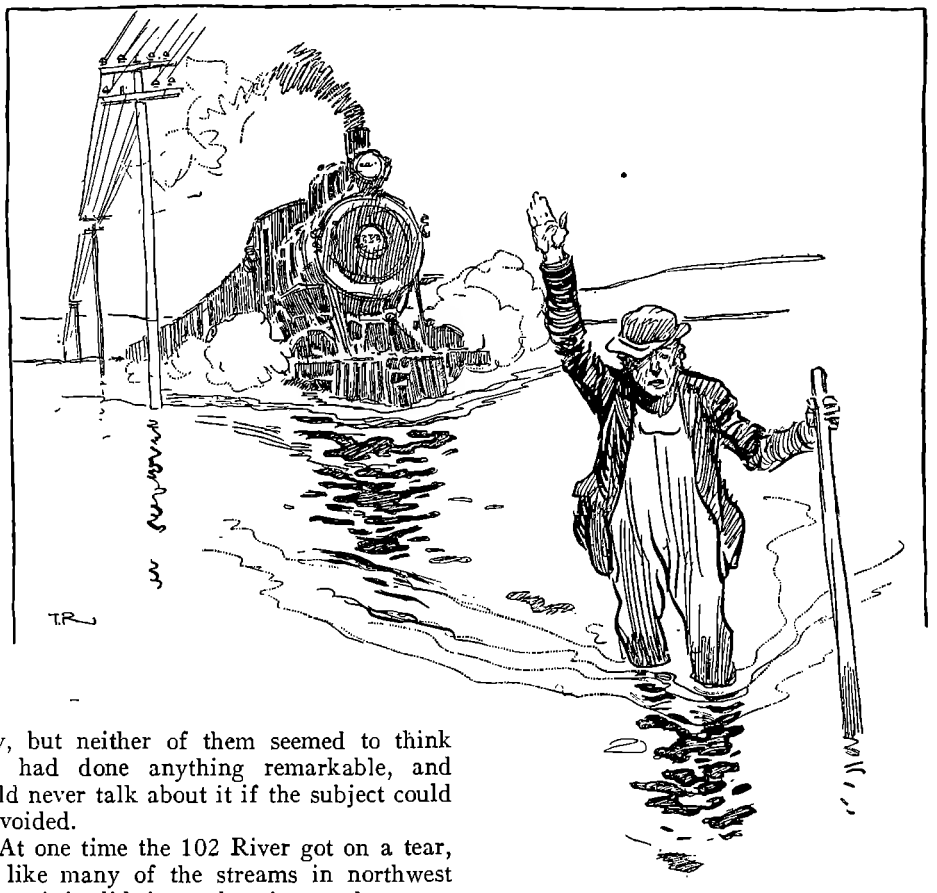
"He eased her off a little, but the fire, driven by the strong wind, was creeping up behind them, and burning brands would be torn from the burning trees and thrown far ahead, and in an instant the dry pine needles on the ground would be blazing like a pile of straw, but after running another mile they found they were drawing out of the fire-zone and the reckless speed was reduced until the engine was running somewhere within the limits of safety again.

"They pulled up to the station and then stopped. The box cars were on fire and burning in half a dozen places, while the engine was a sight to behold. She had been so badly scorched and her smoke-box and jacket were so red where the scorching heat had wiped away the paint that the engine looked at first glance as though she was red-hot, from pilot-beam to cab.

"The lumbermen tumbled out of the cars, all of them more or less scorched, and when the fireman and engineer climbed down out of the cab and struck the depot platform, both of them fainted. Fortunately neither were burned, but the heat had been so intense that the gunny-sacks and their coats were thoroughly dry and were smoking in spots.

"From the time they wrapped the wet gunny-sacks around their heads until they came out of the fire could not have been more than fifteen minutes, yet each of them said afterward that it seemed to be a lifetime. Efforts were made by the newspaper men to get them to tell the

"ALL THIS TIME THE ENGINE WAS DARTING AHEAD."



"CRAIG GOT A HOOP-POLE AND WALKED ALONG THE TRACK SOUNDING."

story, but neither of them seemed to think they had done anything remarkable, and would never talk about it if the subject could be avoided.

"At one time the 102 River got on a tear, and like many of the streams in northwest Missouri it did just what it was least expected to do. Never in the history of the section had the 102 been so far out of her banks. For some ten days all train service on the Creston branch was abandoned. Then Dave Winton, who was superintendent, sent Will Craig, who was a freight-conductor, and Dempsey, with engine No. 30 pulling a way-car, to endeavor to get through with the mails. There were many places where the track was under water for miles and no one knew whether the roadbed was still there or not.

Taking the Mail Through.

"All went well until they reached Bolckow. Beyond that station, and nearly all the way to Barnard, the water was running over the tracks. The train stopped and Craig and Dempsey held a consultation. Orders were to get the mails through and they decided to make the trial. Craig got a hoop-pole and walked along the track, sounding with it as he went and thumping the ties. The train followed him slowly. If the track was still there and the water was not deep enough to reach the fire-box and kill the engine they could get through.

Navigating by Rail.

"At times the water was up around Craig's knees, and for a time it seemed as though they would have to wait where they were until the flood had gone down, but fortunately the water proved to be low enough and they finally got through. Dempsey and his fireman stood in the gangways ready to jump is the track should slip and throw the train down the bank, and they ran through at a rate considerably slower than the average man would walk.

"Once or twice they thought they felt the track slip, but it proved to be nothing serious and they pulled into Barnard safe and sound. Between Barnard and Maryville the roadbed was a little higher and the water did not seem to have gotten over it so badly.

"On the return trip they found that though the water had gone down, the track had slipped in several places, and at one point the wet rail was immediately over the edge of the bank, while the ends of the ties rested on thin air. Neither Craig nor Dempsey ever said much about the matter, and neither of them seemed to think that they had done anything remarkable. I doubt if Craig, in his report, even mentioned the fact that he had to wade ahead and sound the depth of water. The old man had sent them to get the mails through. They got them through, but how they did it they did not consider was anybody's concern. It was all in the day's work, and that was all there was to it.

A Civil War Incident.

"I do not know of any calling that requires such cool, calm nerve in all branches of the service as railroading. During the Civil War there were a great many railroad men in both armies, and they were frequently employed in handling trains in cases of imminent danger, not only from shot and shell, but none knew where a track might be mined or a bridge wrecked. We read lots of stories of hairbreadth escapes and brave actions, but for some reason there is little if any note made of the exploits of the railroad boys.

"I was told some time ago of an instance that occurred during the war. The rebels had a lot of supplies, among others a quantity of powder, that was in serious danger of falling into the hands of the Federals during Sherman's march from Atlanta to the sea. It was at a little station on a road running out of Atlanta. I believe it was called the Georgia Great Southern, but of this I am not sure. Anyhow the name of the road is immaterial now.

"Among the men in the rebel army was an engineer named Spence. I fired for him after the war and he told me the story himself. The rebel commander was in a great stew about losing this stuff, especially the powder, and he called on his men to know if any of them were locomotive engineers. Spence and another fellow named Downey stepped forward.

"The colonel called them into his tent and asked them if they would volunteer to take that train of supplies out. Spence said he would if he could get a good fireman. Downey, who had not had an opportunity to speak first, then spoke up and said that he would fire the engine.

"The only engine available was an old mill named the Tuscumbia, engines being named instead of numbered in those days. She was an antiquated old scrap-heap even for that period. Spence and Downey set to work, and after several hours of hard work got her in shape so that they thought they could get her over the road, but her flues were leaky and she was liable to die on them at any minute. If this should happen anywhere near the enemy it meant a Northern prison at the least.

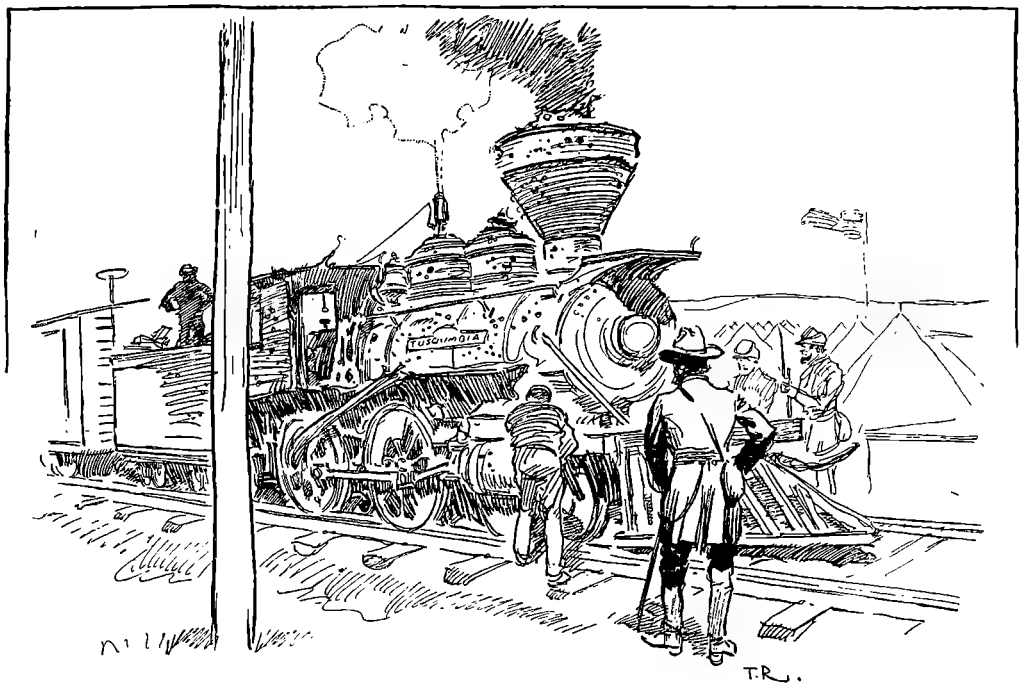
"They chose to go out at night, and it was one of those dark, black, rainy nights when you couldn't see your smoke-stack. They had no headlight, and it would not have done to light it if they had.

"They pulled out about midnight, the third car in the train containing the powder. The federal troops were closing in and the rebel soldiers had to be on the move. Just before they were ready to start the colonel came up and taking Spence aside told him that his scouts had brought in the information that the Federals had struck the railroad about ten miles below and had thrown up earthworks at a point that would command a curve, though the earthworks were not erected with a view to that purpose, and that they would have to run the gantlet.

A Dangerous Cargo.

"Wishing them good-by the colonel stepped aside, and, after having taken farewell of their comrades, who considered that they were going to certain death, they started. Shortly after they pulled out the storm increased in violence. The rain came down in sheets and poured against the cab windows until it seemed as though they were almost running through a stream of water. The lightning flashed incessantly and the roll of the thunder was almost continuous. The noise of the storm was such that it effectually drowned any sound made by the train, but the Tuscumbia was a wood burner and she threw a constant shower of sparks which readily betrayed her presence.

"After running a few miles they stopped at a haystack and piled a quantity of the wet hay upon the back of the tender. As they came near the spot where they believed the Federals were concealed, Downey, who had a hot fire, threw in a lot of the wet hay in the hope that it would stop the shower of sparks. It succeeded for a time, but when they were nearly opposite the Federals they saw a picket fire close to the track and knew



"THE JACKET OF THE TUSCUMBIA WAS A PERFECT SIEVE."

that they could not run much farther before they were discovered.

"At this instant the wet hay ceased to be effective, and the Tuscumbia threw out a shower of sparks. They heard the alarm shot fired by the picket, and Spence pulled her wide open and then crouched down beside Downey back of the boiler-head, where they would have the drivers and lockers on either side as a protection against bullets. They heard the roar of a cannon and the ball took the bell away.

"The sharp crack of musketry was heard and they could feel the thud of the bullets as they struck the engine. The cab windows were shattered and fell in a shower of glass over the two men. A second cannon-ball passed through the car of powder, but fortunately so high that it passed over the barrels.

"They swept around the curve and into the darkness beyond, followed by a storm of bullets as long as they were in range, but they got through and delivered the train and supplies intact safely at their destination.

"The jacket of the Tuscumbia was a perfect sieve, so full of bullet holes was it, while the cab, which was of wood, was riddled and a mass of splinters. Spence heard afterward that when the jacket was removed the wooden lagging was full of Minie balls.

"Spence was called upon for engine service several times after that, but he never again had such an exciting run as when he ran that gantlet. The colonel and the whole regiment were captured, so that Spence never had an opportunity to report to his commanding officer as to the result of the expedition."

A STEAM-ELECTRIC LOCOMOTIVE.

A NEW steam-electric locomotive is being built in England. It comprises a steam turbine, which operates the dynamo-supplying current for four series-wound motors. The engine is being designed to haul express-trains, and will be tested in actual service, so as to show its efficiency as compared with the ordinary steam-locomotive. It is pointed out that turbo-generators have proved so efficient in stationary plants that a similar system would very probably prove to be of value on railways to replace steam-locomotives, particularly on short suburban lines.

"AH, THOSE WERE THE DAYS."

According to a Report Published Eighty-Five Years Ago, a Railroad "Cost Only About Three Times as Much to Build as a Good Turnpike Road."

THE *American Mechanics' Magazine*, of April 30, 1825, said:

"The intention of the present scheme is to introduce a more economical and expeditious mode of conveyance than is now in use for vehicles of every kind, whether employed in the transportation of persons or merchandise. It is proposed to supersede entirely the necessity of horse-power in all public wagons, stages, and mail-coaches, post-chaises, etc., and to employ, in its stead, the more potent agency of steam. A careful examination of the drawings now presented to the public as a plan of general iron railway will, it is hoped, clearly demonstrate the ease, safety, and celerity with which vehicles of every denomination for the conveyance of goods and persons may be propelled by mechanical power. . . . The value of railroads as a medium of commercial communication has not escaped the sagacity of Dr. Young. In his lecture on natural philosophy, he said:

"'It is possible that roads paved with iron may hereafter be employed for the purpose of expeditious traveling, since there is scarcely any resistance to be overcome, except that of air; and such roads will allow the velocity to be increased almost without limit.

"'Iron railways are of two descriptions. The flat rail, or tramroad, consists of cast-iron plates about three feet long, four inches broad, and half an inch or one inch thick, with a flattened or turned-up edge on the inside to guide the wheels of the carriage. These plates rest at each end of stone sleepers three hundred and four hundred weight, sunk into the earth, and they are joined into each other so as to form a continuous horizontal pathway. These, of course, are double, and the distance between the opposite rails is from three to four feet and a half, according to the breadth of the car or wagon to be employed.

"'When wrought iron is used (which is found to be equally cheap, with cast metal, and greatly preferable in many respects), the bars are made of smaller size, of a wedge shape, and twelve or eighteen feet long, but they are supported by sleepers at the distance of every three feet. The wagons used generally run upon four wheels of from two to three feet in diameter and carry from twenty to fifty hundredweight. . . . Yet, a railway costs only about three times as much as a good turnpike road. It is obvious, then, that if railways are to come into general use, two-thirds or more of the expense of transporting commodities would be saved.

"'That locomotive engines are not only capable of performing all that has been promised in some of the prospectuses for new railroads, we are very ready to admit, nor would we indeed wish to be hurled along at the rate of twenty miles an hour; but that they are an important improvement in science, and in their application of human means to the great purposes of commerce, cannot, we think, be denied by any except those whose interest is directly opposed to the adoption of them.'

"An enthusiastic correspondent of a Providence, Rhode Island, paper, who claimed to be the inventor of the cheapest railroads yet devised, gives the following description of his invention, with the costs of material, etc.:

"'Only one English engine alone costs two thousand dollars, which sum the whole of our apparatus does not much exceed, as figures will prove; for seven hundred chestnut rails, at three dollars, amounts to only twenty-one dollars; and it ought to be remembered that this is *all* the expense we are at, and the inference is conclusive in our favor. We place our rails fifty to the mile, by the side of the road to pry out the wheels when they get stuck, and hoist behind when wanted.'"

RAILROADING IS HEALTHFUL.

COMPILATIONS have been made from government reports showing the relative liability to disease of the employees in various trades. According to the returns so far tabulated by the census bureau, the occupation of the steam-railroad employee is the healthiest of all. In a long list of maladies, the only one to which the railroad employee is more liable than workers in manufacturing or agricultural trades is typhoid fever, and to this he is far less liable than are the workers classed as "laborers." The figures show that the railroad man is far less liable to consumption than the workers in the manufacturing and mechanical industries. He is less apt to commit suicide than any other wage-earner, and suffers less from rheumatism and malarial fever. His nervous system, according to the statistics, is in excellent shape. Heart disease and pneumonia are rarer among employees.

PRESIDENT OF THE LINE.

BY JOHN WELLSLEY SANDERS.

For Blander Happens To Be Clivers and Clivers Happens To Be Blander.

SYNOPSIS OF PREVIOUS CHAPTERS.

VINCENT WILSON, having risen from the apprentice shop to mechanical superintendent of the Mainland System, has discovered what he believes to be a leak in the affairs of the company, and criticizes to President Harvey Jones the action of the board of directors on voting $20,000 for certain purchases. Wilson visits a former employee of the Mainland System, "Doc" Ferguson, who imparts to him the information that Kaintuck, a former friend of both, had developed leprosy and been sent to the leper settlement at Molokai. "Kaintuck" was betrothed to a beautiful girl, Meriel Planquette, whose address Wilson is very desirous of obtaining from "Doc." "Doc" refuses to give this information unless Wilson pays him $5,000. Meriel Planquette, after "Kaintuck" had been sent to the leper settlement, married John Toylmore, formerly New York representative of the Mainland System, who shortly after their marriage had been killed in an automobile accident. She now has many suitors, among them, Bertrand Clivers, an elderly broker, and Jimmie Winters, young and impetuous. She loves the latter and promises to marry him, but is won over at the very last moment by Clivers and leaves with him for Europe. Instead of going to Europe, however, Mr. and Mrs. Clivers register at the Continental Hotel on Fifth Avenue, where Winters discovers them. He is mad with jealousy and hatred for Clivers and forces his presence on Meriel as she enters the hotel alone. He reproaches her and threatens her husband. He overhears two men in conversation in the hotel lobby, and as they let fall the word "Clivers" he determines to know more about them. One of them, who proves to be Vincent Wilson, is stopping at the hotel, and to him Winters sends up his card. He is received, and explains the reason of his intrusion. Wilson is eager to hear his story and, in turn, tells of his interest in the Clivers. Winters is persuaded to introduce Wilson to Meriel as she is lunching alone, her husband having left for Louisville to be away a few days. Wilson is also anxious to meet Clivers, and arranges with Winters and Tom Tracie, a detective, to be in the hotel lobby on Sunday evening at the hour Clivers is expected to return. On his arrival he is recognized by Wilson as Stephen Blander.

CHAPTER X.

Surprising Blander.

WHEN Vincent Wilson accosted the surprised Blander in the auditorium of the Continental Hotel, he looked unconcernedly at the man he had been waiting for, and simply said:

"Hallo, Blander!"

The man turned as white as a sheet.

He gulped a few incoherent remarks. He appeared to be choking at one time. He trembled, and a flood of perspiration rushed to his face.

Wilson was alone with him. Tom Tracie and Jimmie Winters were in their seats taking in the extraordinary proceedings.

Tracie's keen, detective eye told him that Wilson had found his man. Tracie had dealt too long with criminals not to know when one was landed.

And as he afterward told a man when reciting this incident, "Nothing so quickly brings a man to his senses—especially one who has absconded or is fleeing from justice under an assumed monacher—as to call out his right name. There is something in the rigid twist of the body; there is a peculiar gleam in the eye; there is a telltale expression that comes into the face that the trained detective cannot let pass. Why, I have come up behind suspected men, called out their right name, and they have turned like a shot. I never knew it to fail."

Blander was Clivers and Clivers was Blander.

Wilson was keen enough not to let the slightest suspicion enter into his meeting with the man he was hunting. As if it were the most accustomed thing for him to meet the officers of the Mainland System at New York

hotels every day of his life, he greeted the newcomer.

"I didn't know that you were in New York," said Wilson, very quietly—just as one old friend greets another. He didn't want to spoil his game. He wasn't going to let Blander—for Clivers's correct name was Stephen Blander, and he held the responsible position of assistant auditor of the Mainland System—into the secret. Wilson was now more convinced than ever that he had his man, but he was determined to get complete proof before he made a charge.

"Why, I'm pretty well—pretty well," said Blander hesitatingly. "You see, I just arrived. I am in New York to look into some of our securities."

The caught culprit always blunders by beginning to make false excuses.

"They must be a source of trouble to a man who has as much on his mind as you," replied Wilson, with all the calmness of a most disinterested acquaintance.

"Yes, they are a good deal of trouble. But they constitute a large part of our business, and must be taken care of. But what—but what brings you to New York?"

"Oh," answered Wilson, "I am here on a little business of my own. I have an old aunt living here that I have wanted to visit ever since my father died. I promised him that I would come to New York some day when I had a chance, and call on her. And as it is the first time that I have ever been here, I thought that I would take a few days off and see some of the sights."

"Pretty big place," said Blander, seemingly satisfied that all was right.

"Yes," said Wilson, "it's the biggest city that I have ever seen. A man could get lost here and no one would know it."

Wilson did not intend that there should be anything significant in this remark. He was not looking straight into Blander's face when he uttered it. If he had, he would have noticed a peculiar reddish glow appear just under the eyes.

Their conversation was interrupted by a bell-boy, who said politely, but with all the shrill fervor of his youthful voice:

"Shall I take your bag to your room, Mr. Clivers?"

Blander caught the boy before he had time to finish the sentence. Just as the lad was uttering the "Clivers," Blander quickly answered:

"Yes! Yes! Of course."

But Wilson's keen ears had caught it. Naught else was needed to create any doubt. Blander was undoubtedly the thief who had stolen the funds of the Mainland System.

All Wilson had to do, then and there, was to call Tom Tracie and make his charge, but—he was going to get his proofs first. Men like Blander must be caught with the goods.

"You must excuse me. I am tired, and must go to my room," and Blander extended his hand in a formal farewell. Wilson took it. A good detective will always equal, if not exceed, his quarry in politeness.

Blander did not have to give himself away further—much to his solace. The shrill-voiced bell-boy was in waiting with bag and key, and, with his well-developed dignity, escorted the magnate to the elevator-door and called out the number of his room.

Blander lived on the seventh floor in suite 737, almost directly over the room that Wilson occupied.

Arriving at the seventh floor, he was met by another boy, who insisted on carrying his bag, but Blander was in no mood now for any sort of attention.

On the journey up in the elevator, something told him—some sinister spirit and his own black conscience—that all was not well.

Once he caught sight of himself in the mirrors that walled the car, and he was startled at his own countenance.

He knew that he looked apoplectic, and he knew, also, that a sudden fright accentuated its symptoms. His face was flushed and burning. The conversation with Wilson had not done him any good. His heart was throbbing and his breath was coming short.

He was thoroughly frightened.

So he brushed the bell-boy aside roughly, and insisted on carrying his bag himself.

When he reached the door of suite 737, he paused on its threshold for a few moments. He wanted to gather his senses before he entered. It would not do for Meriel to see him in an excited state. He must be calm.

He drew his hand across his face. It was still moist with perspiration. Taking his handkerchief, he wiped it away.

Then he shook himself as if it was possible for a man to shake off the thing that is most occupying his mind, just as a dog shakes off the water when it emerges from a pond.

Mustering up courage, he entered. Meriel was seated in a large easy chair, whiling away the time with a novel.

"Ah, John," she said, "back again?"

There was not much of good cheer or welcome in her voice. There never can be where there is no love.

"Yes, Meriel, here I am." Blander's tone

was also that of the peevish, bored-to-death man.

He did not even kiss her. He removed his outer coat, and, without further parley, said:

"You must excuse me for a while, dear. I have had some terrible business reverses to-day—and my head is aching badly. Ring for a whisky-and-soda. I am going to rest for a while."

He entered the bedroom, and without removing a stitch, fell on the bed. Burying his face in his hands, he began to think.

Think he did—good and hard—as a man can only think when he has done that which is dishonest, and when his conscience tells him that he is in danger of being found out.

Blander felt that he was in a trap—that the meshes were being drawn around him tighter and tighter.

Although Vincent Wilson had not given the slightest clue that he entertained the smallest suspicion, yet something told him that there was danger lurking near. He was convinced of it. His bark was close to the rocks.

And so he thought. And his thoughts burned deep into his brain.

He must find a way out of it.

"I must! I must!" he said almost out loud. "I must! I cannot let these fellows expose me, and wind up in disgrace—or—my God!—jail!"

There was the account for steel rails that he had so deftly manipulated for several years. By auditing fake orders for thousands of tons of steel rails for branch roads he had turned a nice sum into his own pocket.

There was the account for coal. By the duplicate bills of the Central America Coal Corporation, he had charged up thousands of tons that the Mainland System never purchased—and the price had gone to him.

There was the account for lubricating oil—

"Here is your whisky-and-soda, dear." Meriel interrupted his reverie, but Blander did not move. He wanted her to think that he was asleep—and he made good his point. Meriel imagined that he was asleep. She placed the beverage on the table and tiptoed out of the room.

He waited until she had probably seated herself again, and he jumped off the bed and swallowed the liquor. It was his intention to order more and drown his feelings in drink, but his better self told him that he needed all his will-power should anything happen.

He thought a while longer, and then Meriel came to him. She reminded him that it was nine o'clock and that she had not had any dinner.

He, too, was getting hungry. But the thought of going down to the dining-room was too much for him.

He could not eat if he saw Wilson again. He suggested that they order something to be sent up to their rooms. Meriel was willing.

In her heart, she somewhat feared the man. She had married him for his money—nothing more—and women who marry men for their money generally become as subdued as tabby-cats on a hearth-rug.

But Blander was frightened—purely and unqualifiedly frightened.

There he was registered at the Continental as Bertrand Clivers—the name that he was known by in New York—and there was a man in the same hotel who knew him intimately by his right name—Stephen Blander.

In New York: Bertrand Clivers, the eminent promoter and capitalist, supposed to be worth millions. In Louisville: Stephen Blander, assistant auditor of the Mainland System, with a salary of five thousand dollars a year, bachelor, churchman, and conservative business man.

He had kept it up so successfully all these years. No one had found him out. Perhaps no one had found him out now. Perhaps the meeting with Wilson was only a coincidence, and, besides, who was Wilson that he could do the assistant auditor any harm?

Pshaw! it *was* only a coincidence, after all. Wilson had probably only spoken to him because he was a stranger in a big city and was looking for company. That was all. After dinner, he and Meriel would go downtown to some gay café, and he would meet some of the men whom he knew in Wall Street, and forget it.

The dinner was served and eaten in silence, and when Blander started for the gay café and the Wall Street friends, he changed his mind.

He was scared—just clean scared. He could not help thinking of Wilson, and shortly after Meriel had retired for the night, he went to the telephone, called up the office, and, in as cheerful a voice as possible, asked if Mr. Vincent Wilson, of Louisville, was staying at the hotel.

"Yes," replied the clerk. "Do you wish to speak to him?"

"No-o," responded Blander. He grabbed the telephone-box to keep himself from falling. He staggered across the room and blindly aimed for a chair.

Suddenly the room began to reel. The

blood rushed in a seething flood to his brain and seemed to blind him. He tried to call to his wife, but he only choked.

Meriel found him on the floor where he had fallen. Without a moment's loss, she called to the office for a doctor, and, not satisfied that the house physician was hurrying as fast as possible, she searched the telephone-book for other doctors in the neighborhood, and called them, too.

The house-physician arrived, and, with the aid of a bell-boy, lifted Blander to a chair. Restoratives soon brought him around. The other doctors who had been summoned soon appeared, and added to the clinic. The consensus of opinion was that their distinguished patient had a stroke of apoplexy. They added that it was nothing serious.

"Still," said an eminent medico, in explaining the matter to Meriel, "it is just as well to be careful that there is no second attack. You should insist that your husband go away with you for a change. He should not think of business for a month. He ate a heavy dinner to-night, and was shocked, probably, by some bad news he heard.

"Our American business men work too hard for their own good," he added for good measure in sentiment.

"Yes," interrupted the unruffled Meriel, "poor Bertrand has been working awfully hard of late."

One young doctor who had been summoned found a chance for a bit of advertising, so he called up the newspaper offices and told how he had been suddenly called in to attend "the eminent financier, Mr. Bertrand Clivers," and that is why all connected with the affair were surprised to see it displayed on the front pages the next morning.

CHAPTER XI.

The Man in 737.

WHEN Blander left Wilson and started up in the elevator to his rooms, as told in the preceding chapter, Wilson crossed the lobby to where Tom Tracie and Jimmie Winters were sitting.

"Well," said Tracie, as Wilson took a chair, "I see that you got your man."

"How do you know?" asked Wilson, with a smile.

"I could tell it by the expression that came into his face the moment you spoke to him. It is an old failing of humanity. The face frequently tells more than the voice. It takes a pretty old and hardened criminal to get away with it. I have seen a man try to control his face, using all the power that he could summon, but there are some little muscles that cannot be kept in leash. Yes, Wilson, I had my eye glued to Mr.—what's his name?—Blander when you spoke to him, and I'll stake my professional career that you have the right man."

"I think that I have," answered Wilson.

"Are you going to do anything now?" asked the detective.

"No," replied the young man. "I don't think that he suspects anything. If I take any steps now, he may crawl through some loophole. I want to catch him with the goods on.

"First, I will run over to Louisville and see our president, and tell him what has happened. I want to ask you if you won't report this matter to your chief, and ask him to let you keep an eye on Blander and report what he does while he is in New York. Just keep him under surveillance. If our president wants him arrested, I will advise you by wire, and you can go ahead. However, I think that he will agree with me that it is best to grab him red-handed."

"You can count on me," replied Tracie. "I am as good as on the case now. All that I have to do is to tell the chief what has happened this night, and that it is the wish of your road that I shall be assigned to shadow your man, and you can sleep easy that I am on the job. And if our friend Winters here," he added, laying a kindly hand on Jimmie's knee, "wants to learn something about sleuthing in a big city, he can come along with me."

Jimmie was willing. The affair had excited him. It gave him an insight into a phase of life which he had believed could only exist in the minds of romancers.

Vincent Wilson had decided to take the first train for Louisville and tell President Jones what had happened, but, on further consideration, he decided that he would not plunge into the case too deeply.

On advice of Tom Tracie, who agreed with him that it would be best to nab the man "with the goods," he sent the wire telling President Jones that he had a clue, and would be home in a few days.

"If you rush at Jones with this, he may want the man arrested without delay," said the detective. "Let us follow him around for a day or so and see what he does. Then you can carry the news to Louisville."

They agreed, finally, on this plan. They were to meet at the hotel in the morning and

wait until Blander had his breakfast. Then Jimmie and Vincent were to go to the latter's room, while Tracie, who was an adept at following a man, would trail Blander.

If he found that the financier was engaging in anything that might be used as evidence against himself, Tracie was to telephone to the Continental, and the other men would join him.

But their plan met a sickening halt when, on the next morning, each read on the front page of his paper the story of Blander's apoplectic stroke.

Each laughed heartily at the sympathetic tone of the attending doctor's remarks in an interview, stating that "the terrible manner in which eminent business men of to-day injure their health by so constant an application to business. Mr. Clivers's sudden attack," the pill-prescriber further said, "should be a lesson to other of our great financiers not to overtax their brains with business details."

Blander did not leave his bed that day. The three men watched closely, but there was no sign of the auditor of the Mainland System or his pretty wife. Blander was advised by a physician to keep quiet for several days. That he was willing to do, but he could only keep his body quiet.

The mind—the seat of the great complex system that controls the human body—was ill at ease. Blander could not keep it quiet. He tried to blind it to the things that were uppermost in it, but it would not be blinded.

His past arose to smite him. He thought that he was sufficiently clever to keep it asleep, so that it would never disturb him, but now it had been aroused by the most fatal enemy that man has ever known—Fear—and it stood before him a mighty mountain that seemed impossible to cross.

Four years ago he took the first wrong step with the Mainland people. That was when he represented to the company that its repair work could be done cheaper by an independent concern than in its own shops.

His figures were so plausible that his superior officers agreed with him. Then he formed a conspiracy with an equipment company and "pulled down" nearly forty thousand dollars before he stopped—and he only stopped because his partner in the criminal transaction was afraid to go any further.

Then Blander thought of the overcharges that he foisted through on false vouchers every time that he was short and needed ready coin. Then the whole system of black and iniquitous graft that he had put in operation danced before him.

Great Scott! but it was hideous!—hideous beyond the dream of a fiend!

It had all been so easy—it had given him so much money—a position in the financial world—but now, it was a reeking, loathsome menace that he could never destroy.

He would have given every cent of the dishonest gains if—but, it was too late.

Fear had him in her clutch. He was a coward, and he knew it. If he had been stronger—stronger and more fearless, so that he could face the world and snap his fingers at Wilson and any other man who might accuse him—but he was simply a coward; a moral, low-down coward.

These were the thoughts that flashed through the unfortunate man's brain as his trained nurse flitted hither and yon in her untiring effort to administer to his every wish, and his wife sat in the parlor of their suite reading away the hours, and dreadfully bored that the conventionality of such a case kept a society woman from life's enjoyments.

CHAPTER XII.

His Black Beast.

IT dawned upon Tom Tracie, as the day wore on, that it would be a good plan to telephone to Blander's rooms and find out just how he was.

Tracie said that he would do this under the guise of an old friend, so the three men walked down Fifth Avenue to another hotel, and, with Tom Tracie as the spokesman, were soon in connection with the sick man's room.

"Is this Mr. Clivers's room?" asked Tracie.

The trained nurse answered the call, and she replied that Mr. Clivers was in, but was suffering from a severe illness.

"So I read in the papers," said the detective, with a tremor of sadness in his voice. "I am an old friend and I was anxious to find out if Mr. Clivers is in a serious way."

"Not at all," replied the nurse. "The doctor says that he must stay in bed for about a week, and then go away to rest up. We are sure that he will be much better to-morrow, but he will be unable to see any one for several days. Shall I tell him who asked for him?"

"Just say Mr. Jones," said Tracie, taking a long chance, and hanging up the receiver.

It was evident, then, that Vincent Wilson could be of little use in New York for a day or so, and he arranged to leave for Louisville

on the first fast train. Tracie would be on constant watch, and Jimmie would be close to Tracie.

Harvey Jones was a surprised railroad president when he heard Wilson's story.

The two men had gone to the president's club for luncheon. There they could be quiet—no one would break in on the recital of the awful exposé.

President Jones listened to the character of one of his most trusted officers being slowly torn to pieces—an idol that he had placed on the pedestal of honor being shattered piece by piece.

"Are you sure?" he asked finally.

"I'll stake my life on it," replied Vincent Wilson.

"Your enthusiasm to run this matter to earth hasn't got the best of you?" asked the president.

"I would kill myself before I would accuse a man falsely," said Wilson. "And to prove that I am right, I ask you not to take any action until we have him where we can bring the proofs of our suspicions right to his face."

President Jones did not answer for a moment. He seemed to be terribly depressed. The fact that Blander was a traitor had unnerved him.

"I never thought that of Blander," he finally said. "To me, he was always the soul of honor. You can never judge a book by its cover."

"Or a dog by his bark," added Wilson.

"What is your plan?" asked the president.

"I shall wait here until I hear from Tracie. Then I will take the first train to New York. If we find that Blander changes his plan and decided to come to Louisville, then I will remain here. I should prefer that he comes here. While I am certain that he is operating in New York under another name, it will be more to our advantage to catch him here.

"Were he arrested in New York, he might fight extradition and get away, and we want to land him!" Wilson brought his fist down on the table with so much vehemence that the president was startled, and then Wilson, realizing that he had overstepped the limits in a gentleman's club, apologized.

"You are pretty positive in your charges," said the president. "Why do you seem so vindictive?"

"I am only doing this for the good of you and the road," he replied. "If I am wrong, I will resign my position, and you can fire a loaded pistol at my head."

Several days passed, and there were no developments. Wilson did not hear anything from Tracie, so he wired him.

The detective answered that Blander had not left his room, and sent a note by the night mail that he had telephoned as "friend Jones" several times and was told that the patient was getting on nicely, and would be out and down-town soon.

But the patient was still thinking. He had it firmly established on his mind now that there was something in the air—that he was being suspected, and that sooner or later he would be brought to face his awful past.

He must do all in his feeble power to prevent it.

Wilson was the man who knew—the man who would be his dark shadow. Wilson would dig into his books and accounts until he found a vital spot, and then—it would be all over. Wilson would keep at it until he could find an opening and then strike—and it would happen soon.

So there is only one thing to do, thought Blander: Get Wilson out of the way!

But how!

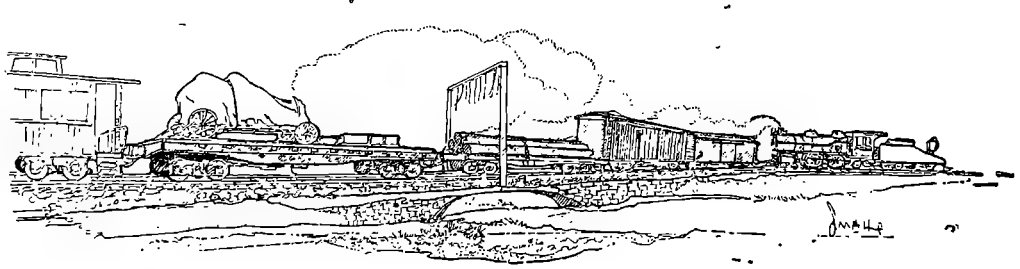
He must be killed! Yes, Wilson must be murdered, sandbagged, drowned—he didn't care. Only Wilson must be put out of the way!

That would be his first duty when he was on his feet again.

He slept better that night.

Wilson must be put out of the way. He would pay to have it done. He knew where to find men who would do the trick.

(To be continued.)



On the Main Line.

Matters of Vital Interest which Show that the Railroads of the World Are Keeping Pace with the Rush and Advance of Modern Industry.

WIRELESS TELEGRAPHY ON THE U. P.

THE Union Pacific Railroad has commenced the installation of a system of wireless telegraphy along its road, says *The Railway and Engineering Review*. A powerful station already has been established at Omaha, Nebraska, capable of communicating with the smaller stations along the line, and towers will be erected now at Sydney, Nebraska, and Cheyenne, Wyoming.

The work of installation is under the direction of Dr. Frederick H. Millener, experimental electrician of the Union Pacific Railroad, who left Omaha this week to supervise the erection of the stations at the places mentioned. They will be finished and put in operation as soon as possible. The first work of the towers will be to facilitate railroad telegraph business during wind and snow storms, and, later on, efficient communication with moving trains.

Dr. Millener has been conducting experiments at the Union Pacific shops in Omaha for nearly four years, and the new installation is the result of these investigations.

1,000 MILES OF ELECTRIFICATION.

IN an address made recently by Professor John W. Whitehead, of Johns Hopkins University, it was pointed out that out of the two hundred and twenty thousand miles of railroad in this country, only a thousand miles as yet have been electrified. Attention was called to the fact that the electrification of the elevated railroads of New York City resulted in increasing the capacity of the roads fifty per cent. Suburban, express, and freight services all seem to improve under electrification, and it is always possible.

LARGEST PLANT EVER MOVED.

AT the cost of a small fortune a giant palm, fifty feet high when in the ground, twenty feet in circumference at the base, and weighing forty tons in its case, has been moved from the W. J. Dingee estate at Redwood City, California, to Santa Cruz.

The palm was first cut out of the earth without disturbing the dirt around the roots more than absolutely necessary, as a large frame, or box, resembling the uncompleted first story of a large frame house, was built around dirt, roots, and trunk. The palm was slowly moved to the railroad tracks as a house is moved, on rollers, and lifted to the flat cars with powerful derricks.

ANOTHER RAILROAD MOTOR CAR.

THE independent gasoline-driven railroad motor-car, is still growing in favor. A new car, seventy feet in length, recently left the shops at Omaha for the Buffalo, Rochester, and Pittsburgh Railroad. This is the seventy-fourth car of the type to be turned out from these shops, and it is the sixth car to be built for service east of the Mississippi River.

EXPLAINS A B C BLOCK SYSTEM.

ALFRED BEAMER, formerly superintendent of the Idaho division of the Northern Pacific Railroad, is now devoting his time to extending the use of the A B C block system of train-despatching, of which he and T. H. Langtry, trainmaster of the Northern Pacific, in Spokane, are inventors and patentees, on lines in various parts of the United States, Canada, and Mexico.

The device is a reversal of the system now in use throughout the country. Instead of the train-despatcher calling up the operators and giving them orders, the new system requires the operators to ask for orders. It has been used on the Idaho division of the Northern Pacific road the last three years, and no defects have been discovered thus far.

"Take three stations designated A, B, and C," said Mr. Beamer in explaining the plan to THE RAILROAD MAN'S MAGAZINE.

"When a train pulls out of A going in the direction of B, the operator at A notifies the operator at B that the train has passed his station. The operator at B then calls the despatcher and asks for a block-card from B to C. If the block shows clear on the despatcher's sheet he gives B instructions to issue a block-card.

"Before the train leaves B the operator at that station calls the operator at C and asks him to pledge the block between their stations. If the block is busy the operator refuses to pledge it, and immediately calls the despatcher.

"No train can pass a station without first receiving its block-card, and instructions are issued to trainmen from station to station. Collision is impossible unless, of course, the three men make the same mistake at the same time."

LARGER LOCOMOTIVES.

THE ever-increasing weight of Western passenger-trains is being met by a steady growth in the size and power of the locomotives. The Chicago, Milwaukee, and St. Paul have recently turned out of their shops two types of six-coupled simple locomotives, with cylinders twenty-three inches by twenty-eight inches, one of which has seventy-nine-inch drivers and a tractive effort of 31,900 pounds, and the other sixty-nine-inch drivers and a tractive effort of 36,500 pounds.

RAILROAD HAS TREES TO GIVE AWAY.

THE Detroit and Mackinac Railway has for the last five years experimented with a forestry nursery on its Tawas Beach property, and at the present time has on hand trees of the following kinds for transplanting: White pine, Scotch pine, Western yellow pine, spruce, and Western white cedar. The company desires to dispose of these trees, and will give them to parties who will plant them and see that they are properly taken care of.

The only charge made will be the expense of packing and freight charges from East Tawas to destination. The company especially requests that farmers on, and adjacent to, the line of the Detroit and Mackinac Railway, make requisitions for these trees for reforesting some of the lands that they have cut over on their farms.

ANOTHER FAST MAIL TRAIN.

BY a new arrangement of schedules on the Pennsylvania, Missouri Pacific, and Santa Fe railroads, a letter can now be sent from New York to Los Angeles, California, in three days, sixteen hours, and fifteen minutes.

This is a gain over the old schedule of about eleven hours, or nearly half a day. This is another instance which shows how thankful the American public should be to the air-brake.

A SMOKELESS LOCOMOTIVE.

THE world is waiting for a smokeless locomotive, and one burning bituminous coal has been developed in Chicago, says the Springfield *Republican*. A group of railroad men and members of the smoke committees from several cities recently saw the "Doylair smokeless locomotive" draw a train of cars from the stock-yards in Chicago, a distance of twenty-eight miles, without any display of smoke or gas, and with but little firing necessary.

It is claimed that the device on the locomotive produces something like perfect combustion, and thereby effects a saving in fuel consumption of between thirty-five and sixty per cent. This seems almost too good to be true, and yet there is no inherent impossibility in the claim made. The fact that the outsiders who witnessed the demonstration were greatly impressed by it is most encouraging.

This ought to be the beginning of a determined public demand that this smokeless device be used on all locomotives, to the speedy retirement of the smoke-emitting nuisances that not only detract from the pleasure of traveling, but sadly pollute the air.

It will be a great triumph for civilization when results like those produced in this Chicago experiment have become commonplace.

NEW SANTA FE ENGINES SUCCESSFUL.

THE giant freight-engine No. 1700, built for the Santa Fe by the Baldwin Locomotive Works, and described in our March issue, is now at work on the Los Angeles division, and giving excellent satisfaction. Her run is over the twenty-six-mile hill from San Bernardino to Summit, which runs from one hundred and sixteen to one hundred and sixty-eight feet to the mile. The two passenger giants, No. 1300 and No. 1301, are pulling trains No. 7 and No. 8 between Barstow and Bakersfield, and are also doing splendid work on this well-known hump.

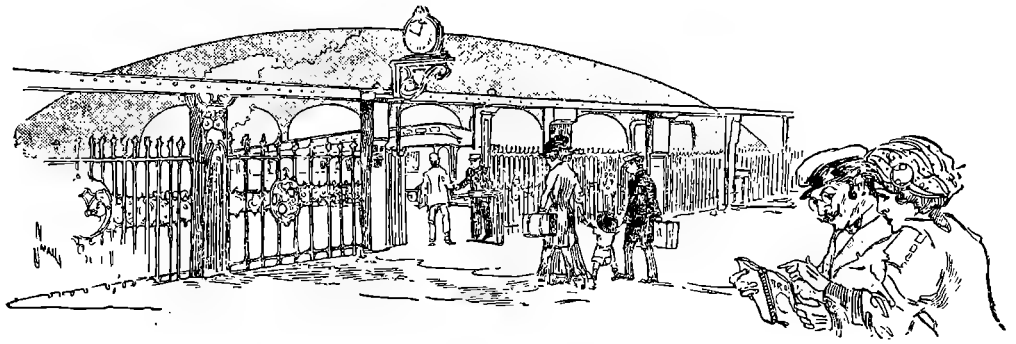
A CAR FOR INVALIDS.

AMERICA has given Europe many valuable ideas for the promotion of comfort and convenience in railroad travel. This country first used sleeping-cars and dining-cars. Occasionally, however, other countries return the compliment by setting the United States an example worth following.

On one of the English lines, the Great Northern, a special car has been provided for persons who are ill or have been injured by accident and can afford to pay for these exceptional accommodations while traveling. At one end of the car are two toilet-rooms. At the other end are two small compartments, with narrow passageways, or corridors, along the side.

The central portion of the coach is spacious and resembles a large parlor, though it has long couches and a bed for use at night. There is room enough for two or three armchairs, and exceptionally large windows afford a fine view of the country by day. During the hours of darkness the car is lighted by electricity. Portable tables, for meals and card-playing, are stored out of sight.

Though the car is meant chiefly for an invalid and the two or three companions whom a sick person would be sure to have, it can also be employed as a parlor-car for a small party of travelers. Steam heat, when necessary, rich carpets, and elegant upholstery add further to the attractiveness of the car.—*New York Tribune Farmer.*



DEFENDING THE PASS.

BY KATHARINE EGGLESTON.

A Bouquet, Two Traveling Bags, a Joke, and Some Other Things Play Their Parts in this Romance.

TOO-TOO-TO-TOOT! Too-too-too-toot!"

It was an imitation of brass band and orchestra combined, meant to suggest the impressive strains of the wedding march. The performer held a big bunch of bride's roses high above his head to keep the appalling length of white ribbon from sweeping the platform.

A riotous volley of laughter greeted his appearance.

The girl who was stirring up the excitement stood in the center of the group, her eyes shining and her lips parted over her pretty teeth.

They were giving her the kind of send-off the most popular girl of the house-party ought to have, particularly when she has the discretion to leave just as there begins to be a pressure on other girls' toes and an uncertainty about the anchorage of other girls' beaus.

Jimmie Linn presented his bouquet with a flourish just as the train came in. He seized all the luggage about—two alligator bags and umbrella—and went into the Pullman.

By processes the girl detached herself from her friends, while a would-be passenger waited to mount the steps she occupied.

At length, she went in, carrying her tell-tale bouquet and followed by the patient passenger.

"There you are!" Jimmie announced as he set her umbrella up in the corner.

"All aboard!" followed by a chorus of warning from his friends came from outside.

He seized the girl's hand.

"Good luck! Happiness! All the cream!" he shouted amiably.

Then he plunged toward the door. The other passenger stood in the aisle. A climax to his joke suggested itself. He grabbed the surprised man's hand.

"You're the lucky man, all right, all right!" he said, frantically wringing the hand he had captured while the porter and the other travelers grinned appreciatively at the bridegroom.

Then, having done as much mischief as the time allowed, Jimmie fell off the train.

Gertrude Fearon sank limply into her seat. The ridiculous bouquet cavorted into the aisle.

The bridegroom, with a hardened face, bolted toward the smoking-room, leaving the porter to render the service he should have delighted in.

"Heah's youah bouquet, madam," Joe said, shoving the terrible trophy into Gertrude's unwilling hands.

"I'm not—" she was beginning, when the conductor appeared and waked her to the real extent of her difficulty.

"De gemmun am in de smokin'-room, suh," Joe announced, with obvious disapproval of

a groom who flagrantly deserted to leave his bride to face the idle curiosity and the conductor alone.

"I—I have my ticket." Gertrude said hurriedly, as the conductor started away. "It's a pass."

She took it from her purse with trembling fingers. If only she need not use it! If she had not counted on it and spent almost all her money, except enough for the small expenses of her trip!

"Mrs. Lucien Wallace," the conductor repeated as he made the record.

The words sounded like a knell to Gertrude. She had accepted the pass with such delight when Mrs. Wallace offered it. Unable to profit, herself, by the transportation that came to her husband from advertising the railroads in his paper, she insisted on Gertrude making use of the privilege.

Now, this very pass made it next to impossible to explain that she was not a bride, and that the flowers and congratulations were a joke. She would merely substitute one untruth for another, for the pass forced her to be Mrs. Lucien Wallace.

The fright that seized her at the thought of coolly tearing down the defense of the pass convince her that she would arouse suspicion.

It did occur to her to send for the man and ask him to agree to the misunderstanding till she reached Chicago, where she changed trains. But her pride shrank at throwing herself on the mercy of a stranger. He might presume, might act up to the rôle into which Jimmie Linn had thrust him.

She would trust to luck. Appealing to him might be defending the pass at too great a cost.

Meanwhile, the man was busy wondering how he was to get his bag.

The conductor and Joe interrupted him.

"Mr. Wallace," the conductor began genially.

"My name's not Wallace," the supposed bridegroom objected.

Joe grinned. He knew the kind of brides and grooms who try to hide themselves, ostrichlike, under disguises that cover only their own heads.

"I want your ticket, madam," the conductor said, retiring from affability to professional brevity.

The man who denied the name of Wallace, because his name was Foster, handed it over. The fact that his ticket was to Chicago, the first change that must be made in the trip that Gertrude's pass indicated, did nothing to destroy the bride-and-groom theory.

"Porter, get my handbag. It's the alligator leather where the—the lady with the roses is sitting," he said, slipping a mollifying quarter into Joe's black hand.

Joe went on his errand, marveling at the ways of the newly wed.

He made up his mind that they had outlined a course of deception, but he knew that the first step had been balked. They had been caught and overwhelmed with the usual attentions, except the rice, for which he was duly grateful. But it looked like the kind of foolishness common to brides and grooms for them to be keeping it up after the cat was out of the bag.

The bride had left her seat when he reached it—and the roses were gone, too.

Joe faced the difficulty of two alligator bags exactly alike. Even his eyes, trained to observe the tale-telling of the small belongings of travelers, could not decide which bag was the bride's and which the groom's.

"Ef Ah wuz to git de wrong one, 'twouldn't make no real diffunce," he thought, laying hold of one.

The groom merely nodded when Joe set the bag down beside him and departed.

Presently, Gertrude reappeared—without the roses.

They were lying in the middle of the track a long way behind the flying train.

The Pullman conductor took Gertrude's berth ticket with no very flattering reflection on the kind of a groom who could leave the details of the great tour to his bride.

Joe confided to him that the groom was a "grouch," and the conductor did not approach him. If he meant to be disagreeable and leave his bride in full possession of the seat, it was his affair.

The sympathy of the two conductors and Joe went out to the pretty bride. They addressed her as "Mrs. Wallace," as they inquired about her comfort. The blood leaped into her face at every repetition of the name. It was shame at the lie she was acting that dyed her cheeks.

She was just beginning to be comfortable, to cease to watch the door for the appearance of the husband who had been thrust upon her, or the conductor who might take up her pass when the train stopped at a station where another road crossed the main line.

A crowd waited for the incoming train. Gertrude's eyes roved from one to another—to encounter a new dilemma. This was six feet tall.

It was Colin McMillin.

Staring over the heads about him, his

glance encountered hers. She saw him change countenance as if he recognized but could hardly believe that he actually saw her.

Her heart seemed to stop for an instant. He was making his way with center-rush vigor toward the car. If he came in, it would be with his characteristic vim. He would greet her as Miss Fearon, and his big voice would assail the ears of the men in whose hands her fate and the fate of her pass rested.

They would be waked to suspect that the groom in the smoking-room had reasons for avoiding the bride in the car. They might go to him and ask the questions that she was sure they had not advanced.

There was but one course open to her. She must forget, in the few minutes before McMillin could appear beside her, that she had ever known him. When he came in, she would—

The door swung in, and—he was there! He came rushing along the aisle with an eagerness that proved his memory better than hers, for as he stumbled over a suit-case in the way, she turned casually and looked at him. Then, quite as if the stumbling stranger had no further interest for her, she turned her glance out the window.

McMillin paused for a second, overcome with surprise, then, with uncertainty and confusion written large on his face, he went on through the car.

Gertrude breathed a long sigh. That was over. But, somehow, the relief she should have felt, did not come to her.

McMillin met the conductor.

"Hallo, Warren!" he said. "Do you happen to know the name of the lady, the young one with the light hair? She looks like a girl I once knew."

The conductor handed him Gertrude's pass.

"Humph! Mrs. Lucien Wallace. So she is married!" Colin observed, as he returned the slip of paper.

"I'm sure I used to know her, Warren. I think I'll find out," he continued as he started back into the car.

"Better not!" Warren warned. "She's got a regular bear—"

But McMillin was out of hearing. He approached Gertrude from behind, but with no effort at stealth. Indeed, there was something particularly assertive in his bearing.

"I beg your pardon, but were you Miss Gertrude Fearon?" he asked.

Gertrude gathered her wits together to meet the returning dilemma.

"Why—oh! Mr. McMillin!" she exclaimed, looking up at him with the brown eyes that had made him tractable on other occasions.

"Did you just go through the car?" she continued, with an air of puzzled inquiry that would have worked with any one less decidedly in favor of seeing things as they really were than as a very pretty woman wished them to seem.

"Yes, I did," he answered, moving her luggage and making a place for himself opposite her. "And you cut me purposely because you thought it would be kinder, or because you didn't want to be bothered with me."

"I—I wasn't sure," Gertrude stammered.

"You didn't want to be," he asserted. "But it is I. You see, I wasn't going to let you forget me."

He had always roused Gertrude's resistance. They had quarreled at the end of the visit she had made to his home town over a year before. Perhaps, she felt the mastery that reached out and sought to claim her, and steeled herself against it because she feared its strength and charm.

"Tell me about—him," he directed when she was silent.

"You tell me first where you are going," she fenced.

"That doesn't matter," he replied; "but I'll tell. I'm going home. So hurry up. It's the second stop from here."

But Gertrude seemed inclined to make haste slowly.

"Aren't you going to describe him?" he urged.

"Who?" she asked.

"Your husband, of course," he grumbled.

"How did you know?" she inquired.

"Saw your pass," he replied.

The brevity of his answers and the grimness of his face made Gertrude eager to find out just about how much he had really cared about her. If this desire had not seized her, she would very probably have told him of the embarrassing predicament in which she found herself and have had him go to the man in the smoking-room with overtures of arbitration. But she cared so much to know.

"Well, he is tall and—" she began.

"What's his business?" Colin asked practically.

"He—why, he's a newspaper man," Gertrude answered, deciding to use the real Mr. Wallace as the basis for her husband-building.

"Newspaper man! Why, I thought you'd marry money!" Colin said, mentally cross-

ing out one of the obstacles he had thought stood in his way.

"You must think I'm a poor sort of girl!" Gertrude exclaimed, turning the blazing brown eyes toward him.

"Maybe I just thought you wanted what it seemed to me you ought to have," he amended meekly. "Well—what else?"

"He's tall—" she began again, finding her imagination unequal to the task.

"You said that! Don't rub it in!" he objected, while he added an item in his favor on the credit side, then gloomily reflected that it was too late to make use of it now.

"And he is dark," Gertrude paused, looking at the brown head across from her.

"The description might apply to you," she said, putting her head on one side and studying him critically.

"It might. But it doesn't, worse luck!" he said regretfully.

"No." Gertrude agreed, finding a wicked joy in watching his deepening despondency.

"It must have been rather a sudden affair," he said, after a considerable pause.

"Yes, it was—very. Really unexpected." Gertrude assented with a cheerfulness that cut.

"Happiness thrust upon you!" he said bitterly.

"Ye—es," Gertrude assented.

"You are happy?" he demanded savagely. "Don't make it worse—that way!"

Evidently, the conductor had not explained that she was on her bridal trip. She prayed that the man in the smoking-room would not appear.

"I'd never know a moment's peace—if I thought—you were unhappy!" he continued, with such fervor that Gertrude thought she must prove her delight at her situation by launching into a description of the man who had won her.

She made him such a wonder of mankind that McMillin sat listening to her with unregenerate hate and jealousy turning his being bitter.

"Of course, you have his picture," he said, in a pause of her eulogy.

Gertrude knew that any woman so lately married and raving so ecstatically about her life-partner would have his picture in her traveling-bag.

She must pretend to look for it, only to discover, with tender regret, that she had not put it among her things.

McMillin lifted the bag on the seat for her. She plunged her hand into it, expecting to feel futilely among the knickknacks and feminine apparel for the picture that was not there.

But her hand struck sharply against the heel of a shoe—a big shoe with a large and assertive heel.

"Why, this is not my bag!" she exclaimed.

"Not your bag?" McMillin asked, all interest.

Then it flashed across her mind that she had noticed the likeness in the two valises that Jimmie had put in the section. She guessed at the exchange that had been made. But she must explain to McMillin.

"Oh, it's all right! I understand now!" she said, laughing. "Jimmie has put something in my bag, just for a joke."

The prevarication had scarcely left her lips when she saw Joe approaching with the twin valise.

"Youah husban' in de smokin'-room wants his bag. Ah done tuk him de wrong one, madam," said Joe.

Colin stared at her with every line in his face settling to stiff rage. She shoved the bag to Joe.

"Is your husband with you?" McMillin asked with icy calm.

Gertrude glanced over her shoulder. She must explain; but she did not choose to lose out now by telling the conductors about it.

"I'll explain. You see—" she began.

A blue uniform appeared in the car and bore down upon them.

"Your stop, Mr. McMillin," said Warren.

"All right, Warren. Thanks," Colin answered as he rose.

He bade Gertrude good-by and hurried away.

He ran against the unwilling groom in the vestibule.

"Hallo, Mac! Where are you going?" he asked, with a delight that found no reflection in Colin's face.

"I haven't decided," McMillin replied, his mind divided between a straight and narrow path to Gehenna or the dull way to his own home.

"Come on to Chicago with me. I've taken a trip-lease on the smoking-room," was Foster's invitation.

The smoking-room! Gertrude Fearon's husband was in there. He would look him over.

"I'll do it, Foster," he decided.

McMillin looked curiously at the one man, who, with Foster, was in possession of the small room. He was elderly, well-groomed, and rather distinguished in appearance. He

could understand why a young girl might not care to have the elderly husband and the youthful lover meet. Perhaps, she had married for money, after all. Maybe that was the reason she had been so strenuous in her resentment of his words.

"Look here, Mac, I'm in a hole!" Foster grumbled. "Some idiot, when I got on the train just behind a pretty girl, congratulated me. She had a big bunch of bride's roses—so we were spotted as bride and groom, and I don't know her from the first Eve in the original garden."

"There's only one pretty girl in the car," McMillin commented absently.

"She's it—the bride—and I'm the groom, drat it! Won't I feel good when Lily and the kid met me at the station?"

"You mean that! Say, what do you mean?" Colin asked, waking to the fact that there were matters of interest outside of his own thoughts.

"Oh! I know what I mean, all right!" Foster exclaimed. "But what does she mean?"

"How?" Colin questioned.

"I happen to know that she isn't married at all. At least, I heard one of the men who came to see her off call her Miss Fearon."

Colin focused his attention on Foster.

"And the conductor calls her Mrs. Wallace! And they all call me Mr. Wallace! What do you think of that?"

"Why don't you ask her—" Colin suggested.

"Haven't I been sitting here for hours expecting her to send for me. Under the circumstances, I hate to go to her and run the risk of a throw-down! I've come to the conclusion, she's working some con game. If she is, the distance I keep from her is going to be some. If it was all straight, she'd have sent for me and untangled me from this matrimonial twist-up."

Colin could not explain, but his conviction that Foster was wrong grew as the evidence to prove his theory was offered.

"Oh, she's all right!" he asserted positively.

"Just judging from appearance, you're correct. But, I tell you, I hear the loose screw rattling!" Foster insisted.

"You are sure the man called her Miss Fearon?" McMillin asked.

"Double sure! He did it several times in my hearing," said Foster.

Colin rose abruptly. He did not stop to excuse his going to Foster. He hurried into the car.

Gertrude saw him vanish through a mist of tears.

She had believed that she had destroyed the last chance at what seemed a beautiful possibility by her double-dealing when the possibility presented itself beside her.

"Look here, Gertie," Colin began, ruthlessly sweeping aside small conventions, "what's the matter?"

"I thought—you got off—"

"I didn't. Please answer me. Tell me what's wrong?" and he took her hand in both of his.

"Oh, don't! What will they think?" Gertrude whispered, watching for the conductors.

"I won't let you go till you tell me!" Colin insisted. "Have you a husband?"

"No, I have a pass!" she wailed.

"Do you want one?" Colin asked.

"Mercy, no! This one is bad enough! I never want another!" she cried. "It has Mrs. Wallace's name on it. I had to pretend that I was married. And that man—"

"I mean, do you want a husband?" Colin asked a second time, keeping intently to the main issue.

Gertrude had become habituated to thinking of her pass above all else. It cried out now for protection. If she told this big man the truth, he would embrace her before any one who happened to be looking, and the whole fantastic fortification she had built would be dashed to ruins.

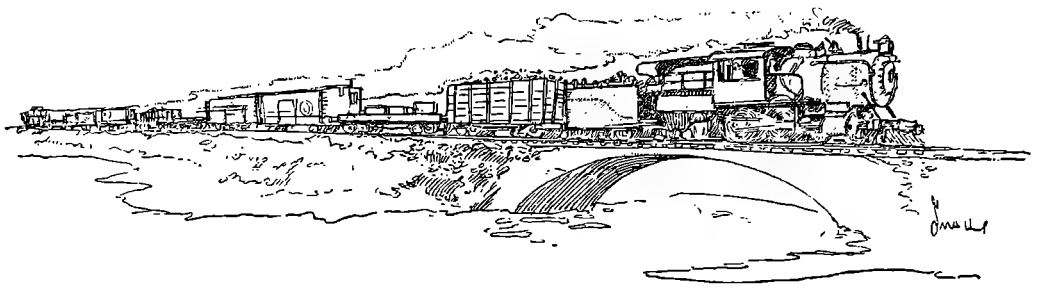
"I—I haven't any real use for a husband," she temporized.

"Come out on the platform, and I'll show you one!" he said, rising and, still holding her hand, forcing her to follow.

"We'll let old Foster out of the smoking-room when we come back," McMillin said, with huge magnanimity.

But Foster was picking up his bag to get off of the train in Chicago when they thought of him again.

Man and wife can't run in two sections. They've got to take the same schedule and running-orders.—Confessions of an Old Con.



Light Runs On the Reading.

BY DEAN VAN DER VEER.

RAILROAD life and the railroad business are pretty serious things; but, like all things of great importance, they have their lighter, humorous side. Mr. Van Der Veer, while making a trip over the Reading, got what one might call some inside side-lights on this humorous side, and here he retails them for the benefit of our readers. A half-hour spent on this side of the fence will be a half-hour well spent. Come on in.

How Finen's False Teeth Carved Out the Destiny of Trainman Rourke, and a Railroad Man's Adventure in the Wholesale Trade.

THE Rose of the Reading Railroad" was an American Beauty of the loveliest and rarest variety. She grew up in the Metzler Nursery, the gardener being Charlie Metzler. The official name of this "Rose of the Reading" was Rose Metzler, and the official position held by her father was that of Eastern shipping-agent of the Reading Railroad, at 67 Commercial Wharf, Boston.

It was that day, a year or so ago, when a certain edition of new pennies came out of the mint at Philadelphia. That day, "The Rose of the Reading" was adorning her father's office in Boston, at the address named above, when Charlie Klink appeared. This is what they said:

She. "How, Charlie Klink?"

He. "How, Rose. Where's your father?"

She. "He's gone to find a car-load of your advertising stuff that seems to have been abandoned because no one wanted to read it."

He. "Look, Rose. Here's one of the brand-new pennies just out of the mint. I got it this morning just as I was leaving Philadelphia, and I brought it specially for you."

She. "Thanks a whole lot. I'll give it to father. He's daft on new pennies. Collects 'em by the ton. He'll be delighted with this one."

He. "No, Rose; you keep that one. I'll get another one for your father. I'll bring it to him here in about an hour from now."

Charlie Klink's Pennies.

And Klink went away from there; and the "Rose of the Reading" continued to adorn the office of the Eastern shipping-agent of the Reading at Boston till said agent came in and was shown the new penny that Charlie Klink had brought her fresh from the Philadelphia Mint.

"And he's gone to get you one of these new pennies, too, father," she added.

"He has, has he?" answered Father Charlie Metzler, picking up his hat, and adding: "I'll be back before Charlie Klink returns, Rose."

And Charlie Metzler also went away from there, carrying in his hand, be it added, an empty clay flower-pot.

Charlie Klink was the Reading's chief publicity man. He had been making things public about the Reading for thirty years. On the day in 1906 when given the chieftainship of the department, his friends of the Reading in Philadelphia informed him that the rector of his church wished him to come that evening to the Majestic Hotel to discuss religious work.

When Charlie Klink arrived at the Majestic, he was ushered into a dining-room that was trimmed all over with white chrysanthemums and green asparagus, in the middle of which a table groaned under a burden of nectar and ambrosia, while around the board, attired in evening dress, sat twenty-five of Charlie's Reading colleagues. It was one grand, merry surprise ha-ha in honor of the newly appointed chief of the git-it-into-print factory.

Then came the day in 1909 when Charlie Klink had rounded out thirty years of salary-gathering from the Reading. That day, again, a drove of his brother officers and gentlemen of the publicity office and advertising office and real-estate office swooped down upon Charlie Klink as he sat at his desk, and buried him alive in gladioli, and filled his ears with speeches and felicitations and congratulations, till Charlie Klink fell back in his swivel-chair, and just couldn't do anything but choke nearly to death from a sob that stuck in his throat.

"I WENT TO THE BANKS AND GOT ALL THEY HAD."

Charlie Metzler's two specialties were: first, new pennies; second, the history of the Reading. He had every incident in the history of the Reading always on the tip of his tongue for the edification of those who wished to hear all about it.

Once he wrote up a lot of more or less historical Reading Railroad incidents for a magazine published by the railroad company called *The Pilot*. Metzler's little pieces in *The Pilot* were printed anonymously.

The editor, Gordon Chambers, started a guessing contest forthwith, by asking the Reading men to write down their guesses as

"WHAT'S FINEN'S TEETH GOT TO DO WITH THAT BOOK?"

to the identity of the author of the stories. Every guesser swore that the man who wrote those articles was one who had personally participated in the episodes described.

Whereat Gordon Chambers laughed in his sleeve, while Charlie Metzler smiled out loud —because every one of the incidents which Charlie Metzler had written up had occurred before ever he had reached the job-accepting age on the Reading or on any other road.

Now, these two Reading boys—Charlie Klink and Charlie Metzler—had both crowded so much experience into their years of toil for the Reading that each was certain that the other could hand him nothing new under the sun. Each kept ever on the watch-out, therefore, lest the other get "one on him."

So, when Charlie Metzler learned from his daughter that Charlie Klink had gone away from there to fetch him back a new penny, he thought he saw through the enemy's game; and that's why he, too, went away from there, to return in about half an hour with a twinkle in his eyes.

Soon after Charlie Metzler's return to his office, in walked Charlie Klink, in accordance with the threat which he had made.

"Hallo, Charlie!" said Klink to Metzler. "I've brought you one of the new pennies issued to-day."

"That's right smart hearty of you, Charlie," said Metzler to Klink.

"Yes, Charlie," said Klink to Metzler, "knowing your weakness for new pennies, I've brought you, not one, but twenty-five. Yes, sir; a whole quarter's worth. Had a time gettin' 'em, too. Had to scurry among my politician and banker friends, and get them to use their influence at the banks in my behalf, getting a few of the coppers here and a few there, till finally I corralled these twenty-five! Phew! It was hot work."

"It was mighty enterprising of you, Charlie," said Metzler to Klink. "I've collected a lot of these brand-new pennies of to-day's issue myself—and now I'll just add yours to my collection."

While speaking, Charlie Metzler reached up to the cobwebbed shelf and took down the clay flower-pot. He shook it now, close to the ear of Charlie Klink, and it sounded like the jingle of brand-new pennies of that day's issue.

"You see, Charlie," said Metzler to Klink, "I didn't know you meant to bring me some of the new pennies, so, early this morning, I went to the banks and got all they had—about five dollars' worth. That's why you had such a time getting *your* quarter's worth. Thanks, all the same. A numismatic scientist like myself doesn't mind having five hundred and twenty-five of to-day's issue of new pennies."

And Charlie Metzler sat the flower-pot back on the shelf.

I met Charlie Klink at the general offices at the Reading terminal in the City of Brotherly Love, and he kindly handed the Reading Railroad over to me, lock, stock, and barrel.

I forgot to tell Klink that this yarn was fit to print. And, now that I've blabbed it, I can only pray that when again I reach the Schuylkill we shall still be friends.

False Teeth Fatalisms.

Passenger-train No. 304, with Engineer Joe Finen up, stood at the station at Sellersville, on the Bethlehem Branch of the Reading. There was no apparent reason why that train should be standing still, because Con-

ductor Haas had already given the signal to get a move on. And now he gave the signal a second time. Still the train did not budge.

"What's the matter up there at the head-end, anyway?" he bawled, giving the signal for the third time.

Not a wheel turned, and Conductor Haas became curious. He strode toward the head-end.

"Hi, there, Joe Finen, what's the matter with you? Why don't you get a move on?" he shouted.

When he came abreast with the engine, he peered round in search of the man whom he was upbraiding; but Engineer Joe Finen was out of sight.

"Where is he?" Haas asked the fireman.

"He's down under the machine," answered the man on the left.

"What's happened to him?"

"He sneezed."

"Sneezed! Say, young feller, that don't go with me—see? What's Joe Finen's sneezing got to do with delaying this train? Hi, you in there!"—stooping down and peering at the engineer, who was on his hands and knees under the engine. "What you doing there, Joe Finen?"

"I'm looking for something, Haas."

"What you looking for?"

"I sneezed."

Dentistry in the Dirt.

"So I hear. Quit this foolin'! Why don't you pull out of here?"

"I tell you, Haas, I'm looking for something. I tell you, I sneezed 'em out."

"Sneezed *what* out?"

"My teeth—and I'm looking for 'em."

"*That's* the worst excuse for delayin' a train I ever heard of!" exclaimed Conductor Haas. "I've heard of trains bein' delayed by grasshoppers on the track, and by trout in the boiler, and by snakes in the fire-box; and I've heard of trains bein' delayed for other reasons miscellaneous; but I never before heard of a train bein' delayed for a gosh-dinged set of false teeth sneezed out of a engineer's mouth. Yes, *this* is the worst ever!"

"I've found 'em!" yelled the engineer. "I'll pull you out now. Sorry to have delayed you, Haas."

"Look here, Finen," said the conductor, "I've got to *report* this delay. What excuse shall I give?"

"Tell 'em it was for a whole lot of very important reasons to the man running this engine," answered Engineer Finen. "Tell 'em this train was delayed because of needing two molars and four crushers and eight grinders and three wisdoms before being able to proceed. And if that ain't enough for a report, tell 'em that the engineer of this train ain't a man to abandon twenty-seven dollars' worth of eating apparatus to save seven minutes to please any condemned railroad that ever was—see?"

Now, you who read think this novel ends right here, do you not? But it does not end here. There's a sequel. What I've narrated is only Part I of the story. Part II is a thriller.

Dental Deduction.

The hero of the second part is a Reading trainman named Ed Rourke. Rourke heard of the catastrophe that had overtaken Joe Finen at Sellersville Station; heard of the sneeze, and of the outgoing impetus given to Finen's false teeth by that sneeze; heard of the ensuing gravitation of the teeth to earth, and thence, by rebound, under the engine. And what he heard set Trainman Rourke to thinking.

Trainman Rourke's run was over the Philadelphia-New York Division. Suddenly now Rourke's fellow trainmen found that he no longer showed up, between runs, at Philadelphia's moving-picture shows; neither did he come now to the P. and R. Young Men's Christian Association rooms for games of checkers. It was also noted that Rourke had stopped taking girls to shows. Altogether it became manifest that Rourke was deliberately shunning his kind in his off-duty hours.

At last a certain trainman found Rourke in Rourke's furnished hall-room, poring over a book which, to the visitor, looked like a tome written in Greek.

"What's that book?" asked the visiting trainman.

"It represents the result of much concentrated thought evolved in my brain," answered Trainman Rourke.

"You mean you *wrote* that book, Rourke?"

"No; I'm merely studying it. The concentrated thought I spoke of took place in my brain after hearing about the teeth that Engineer Joe Finen sneezed out of his mouth."

Money in Molars.

"What's Finen's teeth got to do with that book?"

"Everything. Supposing Finen had not *found* those teeth? Or supposing they had been ground to dust under the driving-

wheels? Well, in that case, Finen would have had to buy a new set of teeth, would he not? Now, then, I hear that he rated the value of those teeth at twenty-seven dollars. When I got to doing my concentrated thinking, I took as my premises the fact that if Finen had lost his teeth beyond recovery, the person who would have supplied him with new teeth would have been a dentist.

"That dentist would have been paid twenty-seven dollars.

"From these premises I reached the conclusion that there must be a lot more money in being a dentist than in being a railroad man. I'm studying to be a dentist."

Trainman Rourke meant business, too. He studied till he passed an examination admitting him to the Philadelphia Dental College. And then followed months and moons of more study — always between runs, for he held down his trainman job good and hard all the time he was burning the midnight electricity. In every off moment he gathered the honey of learning.

Finally Rourke got his reward. He showed up at the Reading terminal in Philadelphia with two sheepskins, one being a diploma from the Philadelphia Dental College, and the other a certificate from the Pennsylvania Board of Regents, setting forth the fact that one Edward Rourke, having qualified as a dental surgeon, was hereby licensed to practise as a D.S.

With these sheepskins in a roll under his arm, Rourke went to Joe Finen and said:

"Mr. Finen, supposing you should again sneeze your teeth out, and supposing that you should not be so fortunate as to find them, what would you do? You'd go to a dentist, and pay him twenty-seven dollars for a new set of teeth, wouldn't you?

A Transaction in Teeth.

"Well, sir, when comes the day of that sneeze, you just patronize one who used to work on the trains you pulled, the same being myself. I won't charge you a cent over forty-seven dollars for a new set of teeth.

"My forty-seven-dollar teeth in your mouth, Mr. Finen, will be worth the extra twenty dollars, because they'll fit you so that you couldn't sneeze 'em out with even a forty-horse-power sneeze."

"Ed," answered Finen, "I'll be your first customer or client or constituent, or whatever you call the person that pays money to a dentist. I'll let you make me a new set of teeth right away. 'Cause, to tell the truth, I've been sneezin' out these here ones nearly every time I've sneezed for the last two or three years."

Whitehead's Wholesale Sleuthing.

It was a dark, dismal night in August, 1909. Torrents deluged the earth, lightnings flashed their fiery darts, and thunders rolled along the vaulted skies. Just then Detective Whitehead, of the Reading Railroad, with his great big black slouch-hat pulled well down over his mustache so as to conceal his handsomeness, said to five other slouch-hatted sleuths who were with him:

"To-night, men, we'll wholesale 'em!"

"We'll wholesale 'em!" chorused the five, feeling of their guns, and retiring still farther into the shadows of the water-tank just outside Eddystone, in the Keystone State.

"By Heavens," went on Detective Whitehead, "they shall not escape us this night. 'Tis a most measly night, and one most suited to our purpose. For this night, of a surety, the biggest number of them will entrain for the city, to avoid trudging afoot through the wild commotion of the elements."

Right here I must furnish a key to the situation. For some months the employees of a certain factory, at the aforementioned town of Eddystone, had been in the habit of taking possession of a freight-train of the Reading Railroad, every evening after the whistle blew for the day-shift to quit.

Freight-Train Joy-Riders.

On that train, then, the men—some two hundred or three hundred strong—would ride into Philadelphia free. They would ride inside of empty cars and outside of the filled cars, on the roofs, and wherever they could get a hold on that freight that always so accommodatingly passed the Baldwin Works just as the men were quitting for the day.

The Reading Railroad and the factory owners both wanted the men to cease riding thus, and made their wishes known to the men in the form of big notices posted up at the gates of the works.

Did the men pay heed to the notices?

No, they rode into Philadelphia every night just the same, literally capturing the train; for how could a few caboose men repel boarders who outnumbered them fifty to one?

Finally the Reading's general manager called Detective Whitehead into his sanctum and told him that "those factory hands must stop riding on that train instanter."

Thereupon Whitehead selected two of the Reading's best sleuths as his aides. At the same time, the head of the Eddystone detectives selected two of his best men as his aides. And that made the total of six in the slouch-hats who were standing in the shadow of the water-tank, and in the pouring rain, near Eddystone, on the terrible night in question.

A Harmless Hold-Up.

The six were waiting for the freight to come by. The engineer had orders to slow up when he reached the tank, and the trap was ready to be sprung, Whitehead describing his intentions very aptly when he said: "We'll wholesale 'em!"

Pretty soon the six sleuths heard the freight coming, saw her headlight, were delighted to see the engineer slow up as he neared the water-tank.

"Now, men," said Whitehead, "we'll each take a separate car. I've already told each of you what to do when once you get inside of your car. This train was run with all empties to-night purposely, so we could catch 'em all inside the cars! All ready now! Don't show any sign of excitement till you get into your cars and see the whites of the enemies' eyes."

As the train pulled up at the tank, the sleuths separated, and each of the six chose a different car, and swung aboard.

Whitehead himself climbed in through the door of the car nearest him. It was crowded with men, all from the factory—and they were old offenders.

Whitehead looked them over a minute, then suddenly whipped out his gun, and cried:

"Hands up, everybody!"

Up went fifty pairs of hands.

"A hold-up!" cried one of the men.

"Ain't it the limit!" cried another. "Right within a few miles of Philadelphia, too!"

Further remarks were made—many of the men saying they didn't object to the hold-up, 'cause they hadn't a cent for the hold-up man, anyway.

"Now," said Whitehead coolly, having made sure that every hand in the crowd was held aloft, "all you men get out of this car, excepting you four," and he flashed his gun at the four men nearest him.

"You four stay right here with me," he went on. "All the rest of you get out—and don't one of you lower your hands till you get out there in the rain. Hurry up, now!"

Like sheep the men tumbled over one another in their haste to get away from the "hold-up man." When all had gone, save the four who had been commanded to remain, Whitehead said:

"Now, then, you four are under arrest."

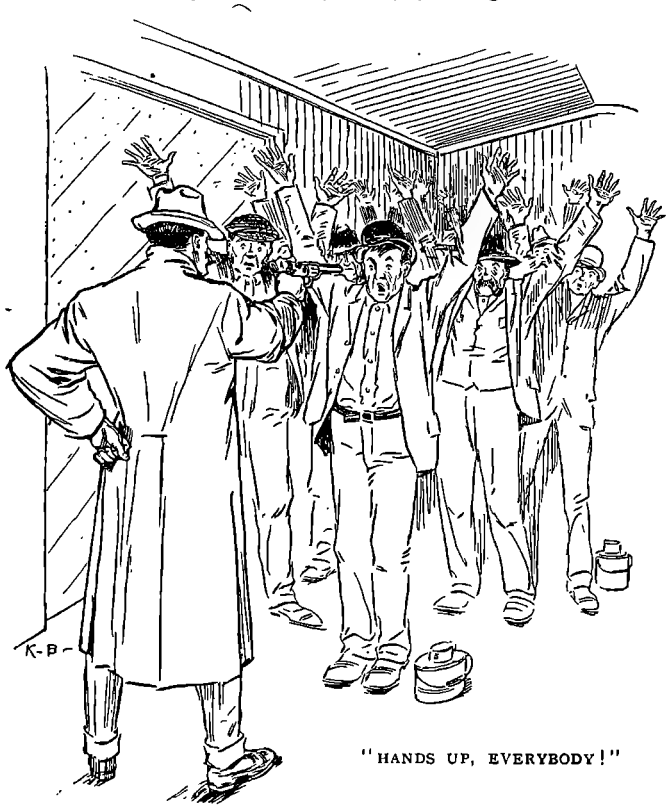
"Arrest!" they exclaimed, astounded. "Ain't this a hold-up?"

"No, t'ain't," answered Whitehead. "I'm going to make examples of you four men. Come with me."

Meantime the other sleuths, in their different cars, had each taken prisoners by precisely the same method.

And Whitehead whispered confidentially, in a dark corner of the Reading terminal:

"Not one of those six-shooters was loaded. We six special officers held up more'n two hundred factory hands without weapons of any kind except six psychologies."

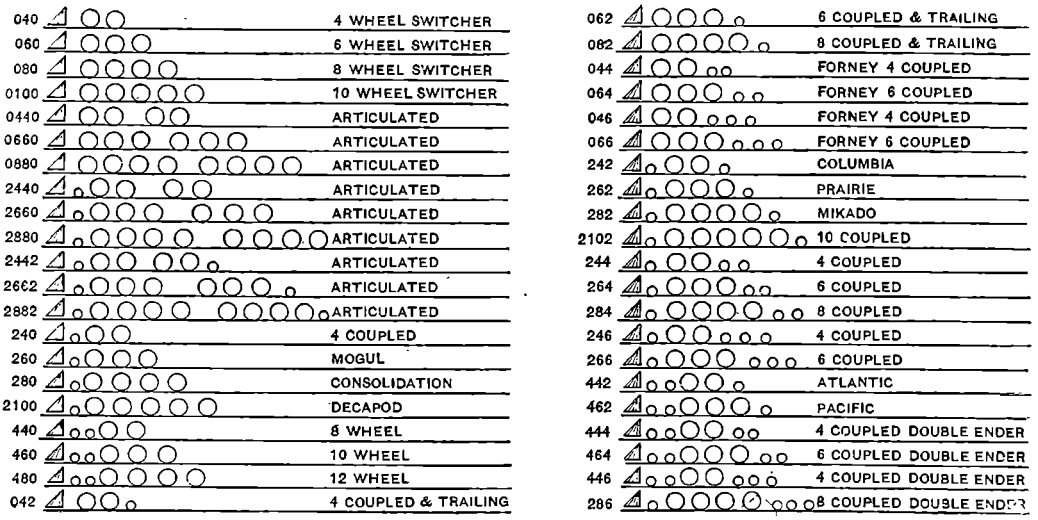


"HANDS UP, EVERYBODY!"

CLASSIFICATION OF LOCOMOTIVES.

(WHYTE'S SYSTEM.)

(*Reproduced from the American Locomotive Company's Bulletin.*)



A CAB WINDOW FOR NIGHT RUNS.

Santa Fe and Chicago and Northwestern Install Device for the Better Viewing of Tracks by Engineers.

THE Santa Fe and the Chicago and Northwestern have adopted a device invented by C. M. Goodrich, of Clinton, Iowa, an engineer on the latter road, which is said to eliminate an annoyance to which engineers are subject on night runs.

Every time the fire-box door is opened a reflection from the front cab window makes it impossible for an engineer to see anything but his own image in the window, which compels a frequent change of focus of his vision, and the effect is damaging to the eyesight. On high-speed runs, an element of danger is introduced owing to the possibility of important signals not being seen or obstructions escaping attention.

The principle of the device referred to consists essentially in setting the front cab window in such a position as to greatly increase its angles of incidence and reflection, thereby projecting the image of the cab interior against the side of the cab itself instead of directly back toward the engineer.

To overcome another difficulty on both night and day runs due to the accumulation of frost on the interior of the ordinary cab window in cold weather a small shutter is pivoted near the forward outside edge of the window frame. In this position the shutter acts as a scoop directing a current of cold air through a series of perforations, past a deflector-plate, and in a thin film, across the interior face of the window.

This shutter is so arranged that at the will of the engineer its forward edge can be brought into contact with the housing along a line forward of the perforations mentioned, thus cutting off the flow of the air across the plane of the window when atmospheric conditions are such as to make it unnecessary.

I'm not popler with sweethearts, but wen they get marrid they are always givin' me pie. There's a reason.—The Call Boy.

Making Railroad Travel Safer.

BY A. H. SMITH,

Vice-President and General Manager, New York Central Lines.

NEVER before in the history of American railways has such a record for comparative safety been made as that recorded during the year ending June 30, 1909. Of the 368 companies reporting to the Bureau of American Railway News and Statistics, no less than 347, operating 159,657 miles of track and carrying 570,617,563 passengers, went through the year without a single fatality to a passenger in a train accident.

While the scarcity of accidents is due in a great measure to the perfection of safety devices and improvements in track and rolling stock, standardization of equipment and operation play an almost equal part with the inventions of Westinghouse, Janney, and Coleman. The adoption of such standard improvements as gage, couplers, and train orders has had its measure of effect.

Vice-President Smith treats separately of every factor that has played a part in the safeguarding of travelers and trainmen, with an insight and understanding that can only come from long years of experience as a railroad man.

The Growth and Development of Up-to-Date Railroad Equipment and Methods of Operation, and the Unceasing Struggles to Find Practical Safety Devices.

IN examining into the progress of safety in transportation by rail, it seems necessary to acquaint ourselves with its beginnings and growth; to determine the elements upon which its development relies, and the necessity which has invoked the various steps of improvement in the plant devoted to transportation, and the art of employing and controlling it in the performance of a public service.

The lay observer will scarcely appreciate, in the absence of the actual analysis, that there exist so many branches of this subject, each branch of which, by itself, may be considered the object of a separate professional science and a distinct human industry.

We will consider, however, the beginnings and the growth of a few of the more important and striking items and their relationship to the state of the art, as portraying, in a more graphic manner, the adjustment, if you may call it such, of safety to progress, or as the subject has been assigned to me, "Progressive Safety."

Automatic Couplers.

Owing to the large number of accidents occurring in 1869, F. D. Adams, of the Boston & Albany Railroad, recommended to the Master Car Builders' Association, at its third convention, during that year, that a uniform height should be established for couplers; their failure to meet when cars came together being considered the cause of numerous accidents.

In 1871 that convention adopted thirty-three inches as the standard height for standard-gage cars. At the convention of 1873, M. N. Forney urged that a committee investigate the cause of accidents, and make recommendations. This committee in the following year gave as the principal cause the same as

reported by Mr. Adams eight years before. They pronounced the tests of automatic couplers to date a failure.

Another committee, at the same convention, gave the first recognition to automatic couplers by reporting that a great advantage would be derived from a uniform draw-bar, such as would be accepted as a standard, and which would be a self-coupler. During several years following, various models were examined, but nothing was found to meet the demands.

Testing the Janney.

In 1887 the executive committee reported in favor of the Janney type of couplers and all other forms that would automatically couple with it under all conditions of service. This report was adopted in 1888 by a vote of 474 for and 194 against. The executive committee then undertook to establish contour lines, drawings, and templets as standard, but found that the Janney patents covered the contour of vertical plane couplers.

This was remedied in 1888, when the Janney Coupler Company waived all claims for patents on contour lines of coupling surfaces of car couplers used on railroads that were members of the Master Car Builders' Association, which enabled the association to formally adopt in all respects this type of coupler as standard.

At the convention of 1889 such action was taken, on motion of Mr. Voorhees, General Superintendent of the New York Central Railroad, and since that time this type of coupler has been the standard, and called the Master Car Builders' Coupler.

In 1893 Congress enacted a law requiring all railroads engaged in interstate commerce to provide on all cars and locomotives a continuous power brake capable of being controlled by the engineman in the locomotive cab, and also automatic couplers which would operate by impact. January 1, 1898, the date which was set by which these changes must be made, was subsequently extended two years.

We now have uniformity in height and contour to insure perfect contact between all classes of equipment, and a positively locked knuckle.

The Introduction of Air-Brakes.

As the density of traffic, and the speed, together with the weight of equipment, developed, following upon the greater transportation to be undertaken, the question of brakes became an important factor in the safe operation of trains. More efficient brakes were needed, the essential characteristics being that they should be continuous throughout the length of the train, simultaneously applied and released, with a single point of control.

In 1869 George Westinghouse, Jr., brought forth what is known as the straight air-brake, consisting of a pump, main reservoir, three-way valve, brake-cylinder, and train-line. Application was made by admitting air from the main reservoir into the train-line. The brakes were released by reducing the train-line pressure into the atmosphere through the three-way valve. The brakes were useless if there was a leak, a break in the air-line, or a parted train.

With these shortcomings in mind, the automatic air-brake was produced in 1873, in which the method was reversed. With the addition of an auxiliary reservoir under each passenger-car and a triple valve, application of brakes was secured by reducing the train-line pressure, while admitting air from the main reservoir raised the pressure and released the brakes. On the application of the automatic air-brake to freight-cars it was found the reduction of pressure was not quick enough to set the rear brakes promptly, and in consequence accidents occurred from bunching of the cars.

Signaling Devices.

However, the following January witnessed the introduction of the Westinghouse quick-action air-brakes, which corrected the previous trouble and made practicable the application of air-brakes to long freight-trains.

Continuing from this time, there has been marked improvement and development in all features of the apparatus, without, however, modifying the essential elements of which it is constituted.

The need of indicating the conditions of the road to trains came with the increasing traffic and speed. As these conditions developed in England before they did here, the first steps were taken in that country.

In 1834 the Liverpool and Manchester introduced the first system of fixed signals, consisting of an upright post with a rotating disk at its top, showing red for danger, with absence of indication by day and a white light by night for clear.

It was found that a long, narrow surface could be seen farther as projected against the horizon or landscape than the same area

in a square or circle. Making use of these results, Sir Charles Gregory, in 1841, designed and erected at New Cross the first semaphore signal.

There was no communication between stations, each signalman displaying his signal at danger after the passage of a train until a certain time had elapsed, when it was cleared. The only information conveyed to the engineman was that the preceding train had passed the station at least the required time before him.

Electricity Helps Out.

The failure or inability to act with sufficient promptness at the display of the danger position and the consequent collisions led to the installation of additional signals to give advance information to the engineman of the position of the signal he was to obey. Thus we have clearly portrayed the inception of the present block and caution signals.

C. V. Walker, of the Southwestern Company, introduced the "Bell Code," which was the first audible method of communication between signal stations. The same year Mr. Tyer supplemented this with electric visual signals, the object being to give the operator indication of the signal having been received and given, and at all times to show the exact position of the signal itself. This suggested the space interval between trains, in place of the time interval, making signal indications definite.

In 1858 the positive block system was established in England, based on the space-interval system.

The First Block System.

Making use of telegraph communication, Ashbel Welch, chief engineer of the United New Jersey Canal and Railroad Company, devised and installed, during 1863 and 1864, the first block system of signals in this country, on the double-track line between Philadelphia and New Brunswick. Signal stations were suitably spaced, and at each station a signal was provided, visible as far as possible each way.

The signal itself was a white board by day and a white light by night, indicating clear, shown through a glass aperture two feet in diameter in front of the block signal-box. For the danger indication a red screen fell to cover the white board or light.

On a train's passing a station, the signalman released the screen, which fell by gravity, and did not raise it until advised by telegraph that the preceding train had passed the next station, thereby maintaining a space interval.

Thus was evolved the telegraph block system, still generally used, with modifications of apparatus and signals, on lines of light traffic. Elaborations of this system were later installed, following more closely the English practise, perhaps reaching the most complete development upon the New Haven and New York Central lines, where it is still in use.

Notwithstanding numerous improvements in apparatus, the same practise of fixing a positive space interval by means of communication between block stations still holds.

The addition of track circuits for locking and indicating purposes and interlocking between stations, more fully effected by the introduction of the Coleman block instrument, in 1896, has thus evolved the controlled manual block system as now used.

First Automatic Signals.

In 1867 Thomas S. Hall patented an electric signal and alarm-bell, used in connection with a switch or drawbridge. Its shortcoming lay in the fact that a break in the circuit or failure of the battery gave no danger indication. To correct this a closed circuit was necessary, although more expensive.

In 1871 Mr. Hall put in operation the first automatic electric block system on the New York and Harlem Railroad, between the Grand Central Station and Mott Haven Junction. It was normal safety. The wheels of a passing train striking a lever completed a circuit, which put the signal to danger after the train, and held it so until the succeeding signal went to danger, when a separate circuit was completed, which released the former signal, allowing it to return to clear.

Track Circuits.

The disadvantage in having the wheels of a train strike a lever to complete the circuit led F. L. Pope to experiment. After a successful attempt in transmitting an electric circuit through an ordinary track with fish-plate joints, he made a signal test at East Cambridge, Massachusetts.

A section of track was insulated from the rest, with a wire circuit, including a battery and electromagnet for operating the signal, fastened at either end to the opposite

rails. The metal wheels and axles completed the circuit, throwing the signal to danger against following trains. A detent served to keep the circuit closed until the next signal was reached, when a separate circuit released the detent, permitting the signal to clear.

In 1879 this system was put in service, and, with some alterations, still remains in some localities.

In the semaphore system, numerous failures have occurred due to the formation of ice and sleet upon the blades. This has led to the introduction of the so-called upper quadrant operation; that is, the motion of the signal being from horizontal to an upwardly inclined position and back.

On account of the wide-spread prevalence of electric lighting and the building up of the territory adjacent to railroads, changes in the color indication of night signals have been adopted generally in such localities, using green instead of white for the safety indication.

Interlocking Switches.

Developing with the manual operation of signals, and as a safeguard against mistakes of the signalmen, interlocking grew up as a means for preventing conflicting signals being given at the same time. As with signals, so with interlocking, England led at first. After a trip to that country in 1869, Mr. Ashbel Welch recommended the advantage derived from the English method of operating switches and signals in large yards and terminals, where the entire control fell to one man so located as to be in touch with the whole situation and equipped with a machine that would not permit of setting up conflicting routes. The plea resulted in the order of a twenty-lever Saxby & Farmer interlocking machine, which was installed in 1874 on the New Jersey division of his line.

Railroads were prompt to see its advantage, and in a short time machines performing its functions were made and installed in this country, not only for the protection of railroad intersections, but for the control of large terminal layouts.

In 1876 the first power-operated interlocking system was perfected, which was the pneumatic type. In 1900 an all-electric interlocking system, advantageous where distant functions were to be embraced within the operation of the plant, and applicable to localities where electric traction was in use, was devised.

The more recent development of power-operated interlocking systems, with complete electric indication of the conditions on all tracks, has made it possible for larger systems to be consolidated under the control of a central plant, and thus under the direction of a central authority; these machines, being of a completely interlocked character, insure greater safety by the central control, as well as greater facility of operation.

The Growth of Train-Despatching.

In this country the first radical departure from the time interval and flagging method of operation came in 1851. The New York and Erie Railroad had established a single line of telegraph between Piermont, on the Hudson River, and Dunkirk, on Lake Erie, for company business.

The superintendent of telegraph, Mr. Luther C. Tillottson, and the division superintendent were together in the Elmira depot on one occasion when they learned that the west-bound express from New York was four hours late. At Corning an east-bound stock-train and a west-bound freight at Elmira waited for the express.

With this information, Mr. Tillottson suggested that the freight-train at Elmira could be sent to Corning and the stock-train at that point ordered to Elmira with perfect safety before the arrival of the express.

The move was successful, and encouraged similar operation, which shortly led to the adoption, with some modifications, of this train-despatching method on the Susquehanna division of the Erie. Its adoption over the entire line followed, in spite of the great opposition which Mr. Charles Minot, the general superintendent, met when planning for its introduction.

Some of the conductors and enginemen went so far as to resign their positions rather than run on telegraphic orders against the time of another train.

Standardizing of Orders.

This system spread rapidly to other lines, and, in company with other features of railroad operation, has been progressively developed and improved. One of the important elements of safety in the despatching practise has been the tendency to the same words in the same sequence to convey the same instructions, insuring a uniform understanding of the instructions instead of permitting a discretionary phraseology in originating or a

misunderstanding in construing the order transmitted.

The rules for train-despatching now prescribe the use of standard forms of expression for orders governing the movement of trains.

Within the past few years experiments have been made with a system of train-despatching by telephone, now in successful operation upon some important lines, and growing in extent. Advantage lies in the ability to use trained railroad employees who cannot work under the telegraph system, not being telegraph operators.

Car Construction.

The telephone despatching system not only insures a rapid distribution of information, but by its greater capacity enables a more complete knowledge of the state of the line to be had in the controlling office, as well as in all the offices tributary to the despatching system.

One of the early problems in transportation was to secure the carrying capacity of cars as well as safety. We have pointed out how it was necessary to add a guiding truck to the English locomotive, designed to adapt the same locomotive safely to American conditions.

Both the excessive wheel loads on four-wheel freight-cars and the greater liability to accident or derailment led to the use of four-wheeled trucks under cars.

Increase in Size.

The increase in lengths of passenger-cars, with corresponding increases in weight led, about 1880, to the quite general employment of a six-wheel truck instead of a four-wheel truck, and even eight-wheel trucks were used for a time, but rejected on account of the excessive length of wheel-base and other complications.

In the latter eighties experiments were made in the development of steel framing for car construction, and built-up steel underframes were introduced shortly after; at first on cars for mineral traffic, where excessive weights and capacities were required. The success of this type of construction has led to its adaptation at the present time to all classes of equipment, and not only steel underframes by complete steel construction in certain classes of service where the conditions require.

The question of steel cars and composite steel and wooden cars is having very careful investigation and experiment at the present time.

The Safe Heating of Cars.

The original method of heating passenger-cars by direct radiation from coal or wood stoves was a source of discomfort to the passengers as well as a menace in case of disaster. This brought about in the late eighties the introduction of the Baker Hot Water Heater, which was a great improvement for the comfort of passengers, but still left a fire in the car.

In many instances of collisions and derailments during this period, especially in winter, the cars were set on fire and the wreckage consumed from the fire scattered from the stoves or heaters.

The growth in the capacity of locomotive boilers, and the perfection of the couplings between cars, has led to the present practise of car heating, which entirely eliminates the presence of any fire or source of danger from that source.

Car Lighting.

Car lighting has passed through the same stages as house lighting, possibly more gradually, on account of the greater difficulties. The old low-roofed passenger-cars were illuminated by candles about two inches in diameter, placed in racks along the sides of the car. With the advent of mineral oil, just before the Civil War, the candles gave place to oil-lamps.

For more than fifteen years this method prevailed, and while the presence of oil-lamps in wrecks contributed fuel to the flames, the proof that they were in any way the principal cause was lacking. Still, to eliminate this contributory feature, attempts were made to use ordinary coal gas, compressed in tanks on each car. This, however, proved unsatisfactory.

In 1870 a system of compressed gas made from crude petroleum had been invented by Julius Pintsch, of Berlin, and by 1887 had been put into a number of cars on European railroads. The light was too dim to satisfy American conditions. It was only a question of time, however, for its proper and adequate development to our needs, when its use became general, on the perfection of the lamp and burner.

For the last fifteen years electric lighting of various types has been in use on cars in an experimental way. While possessing advan-

tages perhaps in safety, owing to low voltages and small quantity of current, its general use has not yet been entirely practicable, owing to the complications involved, either in generating and satisfactorily controlling the current upon the cars, or in supplying it at terminals through storage batteries.

Equally important is the advancement of the rail and its fastenings. The type of metal rails, of which the bottom served as the running surface for flat wheels guided by a flange on the rail, gave place to edge rails on which flanged wheels used the upper surface of the rail before the day of the steam locomotive.

Of the edge type, the first were cast iron, fish bellied, in sections about three feet in length. They were supported by stone blocks or in cast-iron chairs, which were in turn made secure to the stone. Later the same type was made of wrought iron by John Birkinshaw in England, who rolled it up to fifteen or eighteen feet in length.

The Evolution of the Rail.

From 1820 to 1850 the flat strap rail, spiked to longitudinal timbers, in turn supported by cross-ties, was largely used in this country, as it was the only shape that could be rolled here.

The present "T" section was invented in 1830 by Colonel Stevens, chief engineer of the Camden and Amboy Railway, and until 1845, when it was first rolled in this country, had to be imported from England. The poor quality of the iron at this time required such a broad support in the design of the rail for the head that no satisfactory plate-fastening could be secured. Iron shoes, into which the rail ends fitted, were the means of connection.

The greatest improvement dates from 1855, when the first steel rails were rolled in England. Ten years later they were experimentally rolled here. In 1867, through the introduction of the Bessemer process, which made possible their manufacture at a greatly reduced cost, began a revolution in track construction.

While the decade from 1880 to 1890 witnessed the greatest rate of railroad building in this country, it also witnessed the substantial substitution of steel rails on our lines. The earlier rails weighed from fifty to seventy pounds per yard. The increasing weight of equipment brought out a heavier section, and fifteen years ago there was a large percentage of mileage on which weights of ninety pounds and over—and even one hundred pounds—per yard, had been introduced. Under special conditions rails weighing as high as one hundred and forty pounds per yard are used.

Elimination of Grade-Crossings.

In the early days both the railroads and public ways used the natural surface of the ground, as a matter of economy. The public question then was how they were to get the railroads and not how they were to restrict them in the manner of their construction. The districts traversed were sparsely settled and trains were few and slow in their movement; the highways were little used. All of which made for freedam from accident where the two crossed.

With the increase in population and the development of the country came the need of increased transportation facilities. More frequent, faster and heavier trains were moving upon the railroads and a greater number of people came to use the highways. The inevitable number result followed and at length the great number of accidents occurring at the grade-crossings attracted public attention.

The Legislature of Massachusetts took the first action, in 1869, when it provided for the appointment of a railroad commission, to investigate and report upon safer and better methods of construction and operation. They very promptly took up the grade-crossing question.

Grade-Crossing Legislation.

The New York State Board of Railroad Commmissioners was created in 1882 and its membership appointed by the Governor. Among the functions which they immediately assumed was the question of public safety in connection with crossings at grade of railroads and highways. The consideration which this received and the complaints of unsafe conditions, as well as the complications and adjudications involved, led to the passing of the Grade-Crossing Law, which went into effect July 1, 1897.

Not only by the New York State law, but by the Massachusetts law, the method of elimination, as well as the apportionment of expense, is specific. The initiative is open to both the railroad and to the community, and the rapid progress of eliminations in these two States may be taken as an indorsement of the wisdom of such legislation, pa-

ving the way, as it does, for more progress on the question of eliminations than it is believed would ordinarily take place where no specific rule existed for the undertaking.

While the exact conditions throughout the country are not definitely known, it is believed that progress is being made quite generally in this direction.

Notwithstanding the great improvements in road-bed, track, bridges, signals, equipment, and other respects, all securing increased service and safety in railroad operation, the human element is a vital factor which has to be taken into consideration. With a view of raising the standard of individual service a system of physical and educational examinations has been adopted.

The Selection of Employees.

Employees must pass examinations as to vision, color sense, and hearing, and their knowledge of the fundamental rules and regulations, as well as the fundamental knowledge of road, appliances, and equipment. These examinations are repeated from time to time as the class of service and further advancement of the employee may require. Many of the large railroads have established schools, with capable instructors, where employees may receive instruction upon the performance of their duties, as well as affording them an opportunity to fit themselves for promotion.

From a few miles of crude tramways the world has in a century built 500,000 miles of steam operated and 100,000 miles of electrically operated roads; instead of spragging the wheels, we rely on the automatic high-speed brake; the coupling of cars has become an imitation of the action of human hands instead of risking their destruction.

Each train finds the condition of road ahead and protects itself by the agency of electric circuits and semaphores, the sequence of whose operation discloses on behalf of safety any obstruction that may block the route.

Four-wheel barrows are replaced by steel cars, larger than the miner's cabin, and carrying more than his month's output.

Instead of traveling on a tramway stagecoach, the passenger finds available for his comfort a modern hotel on wheels, with every luxury known to-day, electrically lighted, steam-heated, weather-proof. The old strap-iron rails, which became detached and penetrated the car floor, frequently impinging passengers to the roof, have been replaced by bars of steel weighing one hundred pounds to the yard, whose manufacture, installation, and maintenance is prescribed with every degree of refinement known to the chemist and engineer.

Decrease of Fatalities.

Progress of a pronounced character has occurred. That this progress has been accompanied by increased safety is demonstrated by common knowledge and confirmed by the records, both of the railroads and the public authorities. As an illustration, take the statistics of the Interstate Commerce Commission. The increased safety of railroad operation is indicated in part by the following figures, based on the number of passengers carried monthly by the railroads of the United States, which at present is estimated between eight and nine hundred millions.

For the decade following the beginning of the records, namely, 1888-1897, the fatalities were 1 in 45,300,000.

For the next decade, bringing it down to the present time, the fatalities were 1 in 54,900,000.

The gain in ratio being, for the nation at large, fully twenty per cent.

Looking at the conditions in the State of New York, where the density of travel is considerably in excess of that of the country as a whole, we find a report of the State engineer in the year 1862, showing the ratio of fatalities of 1 in 28,200,000.

The average for six years, 1902 to 1907, inclusive, shows 1 in 200,000,000.

An increase in relative safety of eight hundred per cent.

Danger from Trespassers.

One of the thoughts that occurs to me was suggested by a recent exhibit from the records of the loss of life, damage to railroad property, as well as injury to persons and property conveyed, due to the presence of unauthorized persons upon railroad property, whether wilfully or carelessly trespassing.

As an illustration of its seriousness, during last year over five thousand trespassers lost their lives on railroads, besides a large number injured. Numerous mishaps have been traced to acts of trespassers, which may be the secret of many unexplained casualties. The railroads are a highway for the migrations of tramps and unemployed persons, who commit petty depredations, jeopardize

the safety of trains and the lives of employees and passengers.

It seems of no avail that thousands of the worst class are arrested by railroad police forces and convictions secured, as the sentences in the majority of cases serve rather to aggravate than mitigate the evil. One line arrested over nine thousand traspassers during the past year, and secured convictions in seventy-five per cent of the cases; but in half of them sentence was suspended, which usually meant that the offender used the railroad to escape from the scene.

I do not wish to be understood to asperse the administration of justice, nor to insist that offenses of a serious character are always committed by railroad trespassers, but the hazard involved is one that should not be permitted to exist, the railroad property destroyed or damaged bearing no relation to the risk of persons and property transported, and to the enormous loss of life involved.

Wherein lies the increased safety of the future may perhaps be the query in many minds. It must be the product not only of an enlightened public opinion and the conservative wisdom of public representatives, but progressive and careful management, coupled with a sense of discipline and responsibility and industry of railroad employees, who must jointly share the obligations of the problem.

CONCRETE TIES ON THE SANTA FE.

They Have Stood Three Years' Test Without Deterioration, and Cost the Company Only One Dollar Apiece.

IN an effort to make more progress in the mighty tie problem of the modern American railroad to-day, the Santa Fe has taken up the reenforced concrete-tie experiment, and has witnessed the first signs of success.

In June, 1907, the Santa Fe placed twenty reenforced concrete ties in the main track between Los Angeles, California, and Redondo Junction. In March, 1908, the inspector of track and roadway reported that the ties showed "no indication of deterioration or failure in any way," and in April, 1910, they were reported to be "in first-class condition in every respect." The track on this line is ballasted with gravel, and the traffic is heavy.

The McDonald tie is reenforced with horizontal steel rods bent up under the rail seats and tied together at intervals with vertical rods, which serve also as web reenforcement. The rail is secured to the tie by spiking into sections wrought iron pipe set in the concrete.

The inside diameter of the pipe used for this purpose is a little less than the greatest dimension of the spike, so that the spike may be cut through the metal enough to insure a firm connection.

The length of the section of pipe is made the same as the depth of the tie, and both ends are passed through tie-plates and expanded, so as to hold the plates solidly in the surface of the concrete. This construction allows the tie to be used with either face up. It is necessary to use a spike with a head so formed that its under face will conform to the top of the rail base when the spike is partially rotated, for at each redriving the spike should be turned so that its edges will cut an unused portion of the pipe and furnish a new bond.

When the surface of the concrete crumbles under the tie-plate, or the end of the tube becomes too badly worn to hold the spike, the tie may be turned over in the track, thus providing a new surface and an unused portion of pipe to spike into.

The cost of the tie when made in small numbers is given by the inventor at about one dollar and thirty cents, and it is stated on the same authority that a railroad by using company forces in the making of the ties could reduce this price by at least twenty-five cents.

In addition to the installation on the Santa Fe, a slightly modified form of this tie has been installed on all the lines of the Los Angeles Railway Company, but no reports of its performance have been made.

The shortage of suitable timber for railroad ties and the constantly increased expense of the same has led many railroad companies to make experiments costing thousands of dollars for the purpose of improving the tie situation.

At present the Santa Fe is shipping millions of ties from Japan, to place under the rails in this Western country, costing the company millions of dollars.

You can run lots of trains on a single track if they all run one way.—
Foibles of the Chief Despatcher.

THE LURE.

BY ROLAND ASHFORD PHILLIPS.

Even the Qualms of Conscience Could Not Keep Him Away from the Great City He Loved.

THE evening was hot, sullen, and depressive. The sea, running black as ink, seemed to swell up a stone's throw from the low-hanging stars. I sat in the steamer-chair beneath the striped awning, and the monotonous throb of the engines came to my ears like the hum of countless insects.

At intervals a vivid shower of sparks, leaping from the twin stacks, rained down upon the white deck and motionless awning. It was my second day out of Honolulu, eastward bound, and I judged we were making good time toward our port, for a hold of pineapples is a risky cargo under a tropical sun.

Shortly after supper, when I had made myself comfortable on deck, the stranger whom I had twice met in the general cabin came slowly down the deck, his white duck making him a conspicuous figure in the half gloom.

He spoke to me amiably, and lowered himself to a chair beside me under the awning. He was hatless. His head was nearly bald, and he was very thin and gaunt—emaciated, I might say, as if he had recently left a sickbed. I immediately conjured up fever, it being the most plausible excuse in the tropics. His face, lean and hollow-cheeked, although not ill cast, was covered with a light beard, and by the manner in which he toyed with it, I imagined it to be of recent growth. He must have been all of six feet tall.

"I'm lonesome to-night," he confessed. "Will I disturb you here?"

I had no objections. In truth, I was glad he came. So we sat and talked and smoked for quite an interval, until abruptly, and for no stated reason, we spoke of the city toward which we journeyed.

"My home," he said quickly; and there was a ring of pride in his declaration. "My home! I love it! I've watched it grow for thirty years. You Easterners can't realize how we love our city. It's a mother-love," he added softly.

"I've often heard of State loyalty," I observed lamely.

He pulled on his cigarette, the glow bringing his bearded face into momentary relief.

"That city is almost the only mother I have known," he went on. "I was born there. I've watched it broaden out, mile by mile. I

gloried in every building that was erected, every stone that was put in place. Ah!" he breathed reverently, "I'm glad I'm going back."

"Then, you've been away long?"

"Long? I haven't seen the city for three years. Think of that! Three awful years in Honolulu! I've been the same as dead."

The captain spoke for the first time. He had come up from his cabin, and had taken the last chair near the railing.

"I can sympathize with you," he said. "I once had to stay there a whole year. It was like taking a baby away from its mother. Why, when I came back I walked up Main Street crying for happiness. I'd work in the streets like a dog before I'd stay away that long again."

"On the contrary," I observed, after a moment's hesitation. "I never enjoyed myself so well as in the islands. If it wasn't for business, I'd never return. In the past few years I have been something of a traveler, but for some reason or other I overlooked that bit of Pacific paradise until this season. Maybe it was a good thing I did, for I wouldn't have cared to go anywhere else."

"You've never lived in our city," the stranger put in quietly, as if nothing more need be said.

I shrugged my shoulders and bowed beneath his argument.

We smoked in silence for a space, after the captain had accepted one of my cigarettes; and the throbbing of the engines, sounding like the beating of some great heart, seemed to lull one into forgetfulness.

"I've often got to thinking about the poor devils down there on the islands—the fellows who love the city like we do—who can't go back," the captain broke in. "It must be pretty much like Hades, if there is one on earth. I've often got to thinking about it."

The canvas chair on the other side of me, in which the stranger sat, creaked as if he had suddenly twisted about in it. I looked over at the captain, for his remark puzzled me.

"Why can't they go back?" I asked.

"They're afraid!" It was the stranger who spoke and answered me. He was leaning forward in his chair, but the shadow fell in such a way that I could not easily see his face.

Then the light broke in upon me. "I had forgotten. Of course, I understand what you mean now. I suppose there are any number of crooks, blackmailers, ex-bank presidents, and such, floating about the islands, eh? Wonder I hadn't thought of it before."

"I've talked with a good many of them," the captain put in, "and if their sufferings were only known, only understood, I'm sure the law would be satisfied. I'm speaking of their mental sufferings, of course. There's no more horrible punishment than that of the mind, to my way of thinking. Conscience kills where laws only wound. Many a poor man has got free of the law, only to suffer along for a few years, and finally give up. For my part, I'd stay at home and take the punishment."

The captain's simple logic appealed to me vividly. I had never looked upon the subject in that light before. The thought of a man fleeing the law, only to battle with himself, set my jaded interest at fever-heat.

"And these men," I spoke up eagerly, "are they never found out? Do they go under another name?" I wanted to bring out all I could, now that my curiosity was aroused.

"There was old man Hiltz," the captain began, ignoring my direct questions, but not the theme. "He skipped out between meals with a half million on him. Only last month I met an American outside of Honolulu—an overseer on one of the big sugar plantations—who was a dead ringer for him. He had grown a beard, and his hair was gray. He got me aside and made me talk about home to him all day long. It was Hiltz, all right, and he's suffering more right now than he would behind the bars. He'll either kill himself or get reckless and come back."

A sudden recollection swept over me after he had finished. I straightened in my chair.

"The day before I sailed," I put in, "I saw a man watching me in a little café near the park. When I looked at him, I knew I had seen him somewhere before. All the time I was eating I was thinking like mad. Then it came to me. I got up and walked over to his table. 'You're Singleton, aren't you?' I asked, holding out my hand. He stared at me emptily, although his cheeks went very white. 'You're mistaken in the party,' he came back quickly. 'My name's Livingstone!'"

"And you think it was Singleton?" It was the stranger who asked.

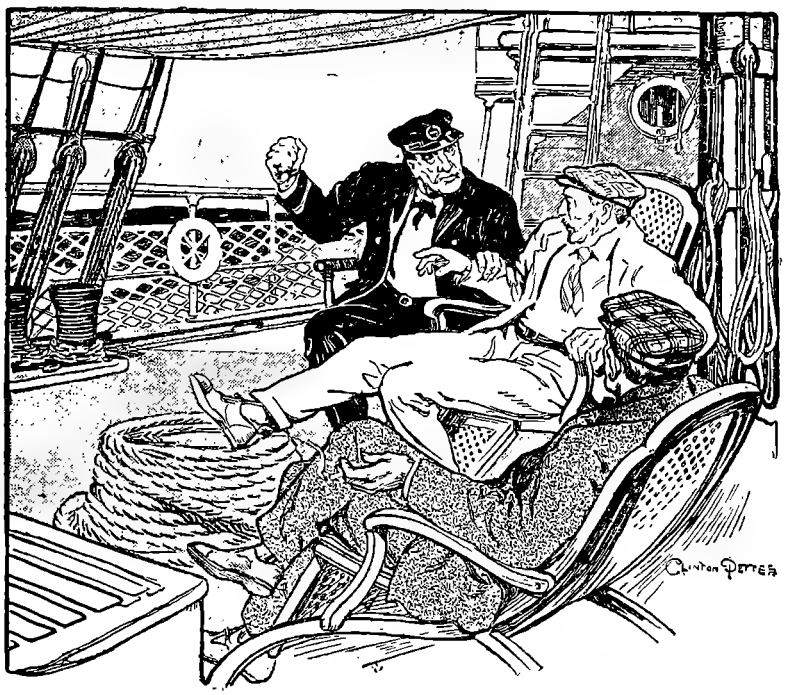
"I was somewhat doubtful then, of course, after his denial, but I'm positive of it now. He was tanned and smooth-faced, but he couldn't hide his eyes. He was once the mayor of our city. Got into some graft deal or other, and skipped."

The captain laughed shortly. "You run across them all over. The woods are full of

them. That makes me think of another fellow—John Warwick. Wonder I never came across him. Maybe I did, though, and didn't recognize him. He's on the islands."

"And what was his offense?" The stranger seemed interested. "Insurance deals?"

"No." The captain shook his head slowly, and appeared to be groping in the past for the memory. "No; he was a pilot. Used to bring in the ships from the outer harbor. One Sunday he brought in an excursion-



"WARWICK WAS DRUNK—DEAD DRUNK!"

boat and ran it on some rocks. It was a little bit foggy, but that shouldn't have made much difference to an old hand like Warwick. Anyhow, the boat went down, and half a hundred were drowned. Warwick dropped out of sight, and everybody thought he was drowned, too. Then one day a mate of mine said he had talked with him in Honolulu. Every time I'm in the town I keep my eye peeled for him."

"And what's the feeling against him at home?" the stranger questioned.

"Well, as a general thing, we don't jump at conclusions. But it was a pretty hard blow for some of the people. It was about as big a crime as a man can commit, I'm thinking. And I suppose if he was to step ashore today there'd be something like a lynching. The law's good enough in its way, but if you or me had a little kid on that boat—or a wife—I'm thinking we'd forget and—"

I interrupted. "But you said it was foggy. It might not have been neglect. We ought to give him consideration, don't you think?"

The captain's big hand slapped to his knee.

"Warwick was drunk—dead drunk!" he exclaimed.

I drew my feet down from the coil of rope. A puff of wind came from somewhere, bulging the awning above us. I stared meditatively across the white space, where a lamp glowed amidship. Far up, toward the cabin, a door opened and shut, and a bar of light shot obliquely over the deck. In another moment the wireless operator came down and addressed the captain.

"Just picked up a message from the Gladola, two days out from home. She'll be in our radius for the next hour or so. You said you wanted to speak to her."

"Quite right." The captain lifted himself erect. "You'll excuse me, gentlemen?"

They walked away, the coatless, white-shirted operator in the lead. I watched them subconsciously, until the door opened and slammed. Then the stranger moved in his chair, and spoke.

"What do you think of this Warwick?" he asked.

"I believe if he loved the city as you fellows seem to, he'd risk coming back."

I received no answer. Then curiously I resumed:

"And what do you suppose would be his greatest concern, once he left the island? Capture?"

"I don't think so." The stranger spoke so queerly that I turned about in my chair. "He would be fearful that he would not see the city, after all."

"Not see it?" I echoed.

"Yes." The man got to his feet, and tossed away the remaining part of his cigarette. I waited expectantly for him to go on, but he did not. He stood for the interval, gazing far out over the black water, and then, without another word, turned and walked up the deck.

The following day passed monotonously, and it was at supper that I first caught sight of the stranger. He appeared very nervous, and did not seem at all anxious to talk.

"You'll see home in the morning," I said hopefully, as we were passing out. Then he looked at me, and for the first time I noticed how vague and dead his eyes were.

"I—hope so," he struggled.

We found our chairs again, but somehow I felt no inclination to smoke. The air was strangely oppressive, and seemed to fairly choke one. The evening sky, too, took on an unusual pallor, I thought, and the long, uneven waves that rocked away toward the horizon were very high, very oily, and black.

"What time—are we due to-morrow?" the stranger's voice broke into the hush.

"Early. Some time about nine o'clock, I should judge." And then, after a pause: "I suppose the city will be changed—since you last saw it."

I was surprised to find his fingers on my arm.

"I hope not," he faltered. "I—hope not. I want to see it — just like when I went away. I don't want to see a single thing changed." His fingers tightened. "Heavens!" he breathed heavily. "To see the old city again; to walk the streets, in the crowds; to hear all the old familiar voices, and to see the old familiar buildings—the buildings I have watched rise up from the vacant wastes; to feel the breeze from off the bay; to watch the ferries—"

His voice trailed into a whisper, and I could hear him breathe like a man who has run a long distance.

Dumbly I realized how he must have felt and how inadequate his words were to express it. And later, when I sought my stateroom, I pondered deeply over the man's infatuation for his mother city, wondering what peculiar mysterious power it possessed to so enslave its children.

I was a long time in getting to sleep, for my room was like an oven. Above me, on the shelf, droned an electric fan, but the air it stirred was stale and lifeless. However, after a time, I must have dozed off, for abruptly my eyes snapped open, and I found the daylight streaming in through the window.

I dressed, and went out on deck. With the possible exception of the watch, no one was about. I paced up and down for a time, and then, rooting my very feet to the deck, I saw the ship's operator leap grotesquely out from the cabin and lurch toward me.

His face was pasty, and his eyes, staring from their sockets, were as hard and fixed as glass. He was clad only in his pajamas.

"For love of Heaven!" he choked, as he neared me. "I just picked up the first coast wireless. The city—" He fumbled desperately at his throat. And while he stood there gasping I saw the figure of the stranger climbing the short stairs toward us.

"Go on! Go on!" I urged.

"The city—was destroyed—by earthquake—this morning!" the operator stammered. "She's in flames—burning—burning—absolutely no hope left! Everything's gone!"

With horror-stricken eyes, I saw the stranger grope blindly for the hand-rail, choke out something like a scream, and then crumple limply to the deck.

Stunned, yet retaining possession of my senses, I managed to call one of the watch, and together we bore the unconscious man back to his stateroom. With a queer lump in my throat, I saw that his berth had not been slept in.

After I had hurriedly bathed his head in some cold water and unloosened his clothes, he finally came back to the world again. He mumbled incoherently to himself, and his glassy eyes stared emptily at the ceiling.

"All—gone!" he whispered. "All gone! I knew—knew I was—never to see her again. My poor—poor—home!"

"Brace up," I encouraged, after his voice died away. "Don't take on like this. Be a man!"

He sat up rigidly, as if my words had been a needle in his flesh, and instinctively I recoiled.

"I will be a man," he returned huskily—"I will be a man. You'll help me, won't you? I've been a miserable coward all these

years. I've sinned—sinned! I've sinned against my own city—my home!" His eyes suddenly became radiant. "But I'm going to repay! I'm going to repay!"

"You're ill—out of your head," I faltered. "Lie still and rest."

"My Heaven!" he cried, throwing wide his arms. "Are you so blind? Don't you understand? I'm Warwick—Warwick!"

DESTITUTE OF ALL THOUGHT OTHER THAN TO SAVE.

Where we entered the harbor I did not know. The pilot's confession, abrupt as it had come, together with the catastrophe into which we were heading, robbed me of all immediate reason. I leaned against the rail of the ship, and watched the vast cloud of smoke growing larger and more terrifying, spreading from horizon to horizon like a black pall. The captain rushed back and forth, shouting incoherent orders, which the white-faced, silent crew obeyed mechanically.

While we were creeping in toward the dim shore — for the captain had announced his intention of landing at the first convenient dock inside the harbor — and I had huddled against the side of the pilot-house in order to keep free from the suffocating smoke, I felt a hand on my arm, and, peering around, found Warwick beside me.

"They're dying—dying," he mumbled over and over like an automaton, and pointing with his outstretched arm. "They're dying —burning—all my people—all my city!"

When the smoke lifted a trifle, and the ship pushed her nose into a deserted dock, Warwick gave a cry and leaped from my side. I called to him frantically, but he kept on, unheeding. What sudden impulse guided me I could not tell, but without a second thought I followed him. He did not wait for the plank to be lowered, but, climbing the rail like a cat, leaped upon the roof of the dock-shed, and dropped nimbly to the ground. Like a man possessed, I followed him.

Now that we were upon solid ground, I caught up with him.

"Where are you going?" I shouted, for the noise about us was deafening. "What are you going to do?"

"Let me go," he screamed. "They're dying—burning! Don't you hear them calling —calling for me to help them? Do you want me to be a coward—again?"

So we raced on, side by side. An exulting madness burned in my veins. I remembered nothing, thought of nothing, cared for nothing, save that countless humans were in danger about us, and that we were going to help them. Explosions followed one upon another, rocking the very ground beneath us.

We left the docks behind, and hurried up the steep hill toward the burning, smoke-obscured area above. Many people passed us now, all running in the opposite direction, their arms filled, yet all strangely silent and like so many frightened spirits.

A woman carrying a baby tripped and fell heavily, and Warwick, his face working queerly, bent over and lifted her to her feet again. After she had gone he came close to me and spoke.

"The baby—was dead," he panted, and I saw that the tears were running down his cheeks. "I saw its poor little face. It was dead, and she didn't know it."

Walls were falling about us, and the smoke became so dense that we could scarcely distinguish the road. Weird flames licked here and there, their breath stabbing our lungs. I blindly followed Warwick from one house into another. My hat was lost. I threw aside my coat. My arms grew numb with pain, and my fingers were bleeding; and yet, mad men that we were, we realized nothing.

In the midst of this chaos a little girl, wildly clutching a doll, her clothes all but torn from her poor, thin body, ran out into the road. I lifted her into my arms.

"Mama—my mama!" she began to sob hysterically. "My mama won't wake up!"

I ran across the yard, and climbed through a broken window of the house.

"My mama—was in bed," the child went on, her thin voice barely audible. "She won't wake up!"

I groped my way through the rooms until I found the chamber. Half-way toward the bed a violent nausea gripped me. The whole side of the wall had fallen in, and only the end of the bed showed beneath the débris.

I staggered out, holding tight to the child, unmindful of her screams. Within a short distance I came upon Warwick; he seemed to be here, there, everywhere, shouting and talking wildly with himself.

Fascinated, I watched him. He dashed into this gaping doorway and that, appearing after a certain length of time with a limp burden in his arms. He appeared to be destitute of all thought other than to save, save, save.

Standing there, amid the flame and smoke and crumbling walls, I could but dimly wonder whether this one hour did not more than balance his sinning. Surely the scales of mercy are just!

Then the child on my shoulder began to whimper, interrupting my thoughts, and, clapping a brutal hand across her mouth, I hurried on.

A stone building broke out of the pall ahead of us, and I saw Warwick standing irresolutely before it. Parts of the wall were crumbling, and the flames were leaping out from the windows.

"Don't go in there!" I shouted to him. "It'll fall—fall—in a minute! Stand away!"

But he only laughed—gaunt, burned, and horrible as he was—and stumbled unheedingly toward the sagging door. His beard had gone—his clothes were in threads, and smoking. His eyes were bloodshot, hard as glass, and bereft of all understanding.

"There's—some one—in there," his voice rang back to me. "I heard them calling!" And, before I could move or speak, he had gone.

I saw the flames leap higher and higher, roaring like a wind among the trees, and then the walls swayed in like a curtain in the breeze.

The sudden collapse stunned me. I reeled over as though some mighty hand had crushed upon my chest.

The child's sobbing cleared my brain for the moment. The poor little blistered face, wet with tears, buried itself against my shoulder.

I struggled to my feet, lifted her once more into my aching arms, held her tight against my heart, and, turning, followed the army of white-faced, silent stragglers that moved out toward the open, green hills above us. Up there the sun was shining.

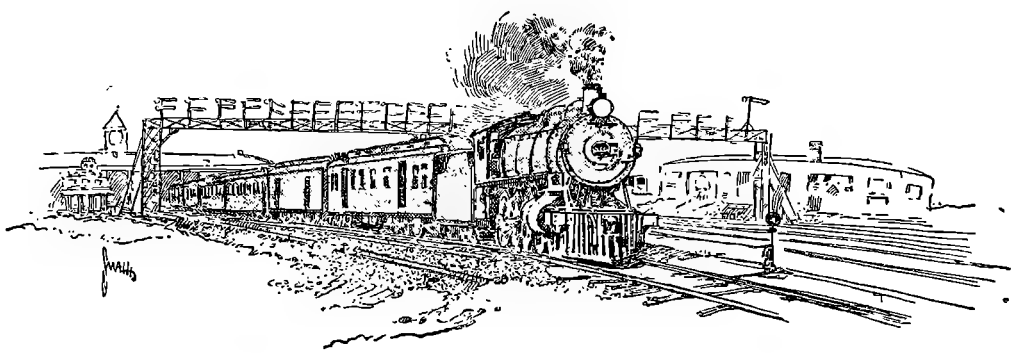
SAFE-GUARDING OPEN COAL-CARS.

WHITEWASHING coal would seem to be rather a silly proposition; but it is not done for looks, nor to change the quality of the material. It is rather a detective scheme which is simple and is said to be effective. The purpose is to locate loss of coal from open cars in transit.

The top of the load is sprayed with lime and water—an easy and cheap process. It is thus whitened as the water evaporates, and the appearance is that of a load of white coal. Any disturbance of this surface by removing of even a small quantity, is readily noticeable. By observing this at division and junction points, the place of the disappearance can be approximately located.

This plan has been tried on some Western roads and has, we understand, been abandoned solely on account of the opposition of dealers who claim that their customers do not want coal so treated. As the quality of the coal is unaffected, there can be no reasonable objection to it.

The real reason is believed to be that dealers prefer not to get the protected coal, but prefer the opportunity of making claims for alleged losses in transit. If this is the fact, there is a loop-hole here which railway commissions, State or National, might well look into. It is to the best interest of shippers and carriers that there should be no losses in transit and no bogus claims for alleged losses.



Told in the Smoker.

BY OLIN CRAWFORD.

A Bunch of New Ones by the Knights of the Grip, Who Keep the Smoking-Compartment in a Good Humor and Help to Shorten the Long Hours Spent in Gliding Over the Rails.

"EVER since that experience on the Big Four, I've always felt nervous about being the only one up, in a carful of sleeping passengers," said Frank Wade, who travels for a Boston shoe factory. "And I guess Sam Rosenthal feels the same way. He ought to. He's got more cause than I have. If I was Sam I wouldn't feel safe in a sleeper-berth till I'd roped myself down.

"Sam and I were in the same line at the time, both running out from Boston selling to the wholesale trade. We ran across each other in St. Louis, both on our way to catch the night train for Cleveland. He managed to get a lower berth, while I drew an upper one several numbers away.

"We turned in early, for we had both had a hard day, and I slept like a log until the small hours of the morning, when a terrible rumpus in the car woke me up.

"A prim old lady across the way from me was screaming that she'd been robbed of all her money and a gold watch, and the Pullman conductor and the train conductor were trying to pacify her. About the same time, another woman in the other end of the car discovered that she had also been robbed. She had lost her money and a pearl pin, and you would have thought she was going to lose her life, too, from the row she kicked up. It certainly looked as if there would be a hot time for the car-porter at the end of the run when the railroad officials took him in hand.

"It was close to an hour before things quieted down. Then I went to sleep again, but somewhere near daylight I woke up with a jump. A woman was screaming 'Thief!'

"In a second my head was out through the curtains just in time to see a fat man jump out of an upper berth and land with a whoop on the shoulders of another man in the aisle. The man he landed on crumpled up in a heap under him, and in no time half a dozen other passengers were helping the fat man pin him down.

"It looked like a football scrimmage, with fellows in pajamas and nightshirts all tangled up, and it sounded like a lunatic asylum broke loose. Every woman in the car was screaming like a maniac, some of 'em crying 'Thieves!' and others 'Murder!' while the man at the bottom of the writhing pile was yelling for the police.

"The prim old lady who had caused the first row was out in the aisle protesting that

the thief had come back and had tried to get into her berth. And when the fat man had untangled himself from the scrimmage he backed her up.

"His berth was directly over the old lady's, and when she screamed he jumped out in time to land on the man as he was fumbling at her curtains.

"While she was telling her story somebody yanked the captive up from the floor by the collar. And who do you suppose it was, who had been down at the bottom of that free-for-all?

"For a minute I thought I must be having a nightmare. It was Rosenthal! A five-thousand-dollar-a-year man who had been on the road for twenty years, caught robbing berths!

"He had a black eye, his clothes were ripped up the back, and blood was trickling down his forehead, but it was Sam all right. The most curious thing about it was that he was yelling 'Police!' It isn't natural for a man caught in the act to yell for the police.

"But there didn't happen to be any policemen aboard. It would be time enough to call them when we got into Cleveland.

"In the meantime, Sam didn't seem to realize what a serious scrape he'd got himself into. Instead, he was swearing vengeance and talking about suing the road and having the fat man arrested for assault.

"'Sam,' I said, 'you had better keep quiet, and when we get to Cleveland, I'll look up a good lawyer for you.'

"But that only made him madder.

"'Keep quiet!' he yelled. 'Would you keep quiet if you'd had a whole car-load of passengers jump on you? It's lucky I'm alive!'

"'But, look here, Sam,' said I, 'you're in a tight fix. You've got to face a charge of robbing that old lady.'

"'What!' he cried. 'Why, I wasn't doing a thing. I'd only just crawled out of my berth when that three-hundred-pound brute up-stairs landed on me! And then the whole carful came and piled on. A lunatic asylum's being moved, I guess, and this is it. That's the only explanation I can think of.'

"Of course, I had decided already that he was the crazy one; that he had had a sudden attack of insanity that had shown itself in kleptomania.

"Well, we flew along without a stop from the time of the riot till we rolled into Cleveland. In the Cleveland yards a couple of detectives got aboard. One of them nabbed Sam and the porter. The other happened to take a peep into the wash-room on his way through, and he stepped in and laid hold of a little man who was sitting all alone in there smoking.

"He had recognized him as an old-time crook, who hadn't been out of prison three months. The stolen jewelry was found on his clothes.

"Even then the old lady wasn't satisfied when they let Sam go free. She wanted to know why he had been trying to get into her berth. That was what puzzled me, too.

"It wasn't until two months later that something happened in the Great Northern Hotel, Chicago, that solved the mystery. Rosenthal appeared in the lobby at midnight just as a lot of people from the theaters were coming in, clad only in his pajamas.

"He was walking in his sleep, and, as he finally admitted, that is just what he must have been doing in the sleeper when the old lady caught him."

THE BRAVERY OF SCHWARTZ.

THAT story reminded Frank Hoover, who is one of the army of clothing salesmen that goes out from the wholesale district of Broadway, of another night-alarm in a sleeping-car.

"M. Levy & Sons, in Bond Street, used to have a chap traveling for them," said Hoover, "who was one of the finest self-advertisers on the road. His name was Schwartz, and with his black beard, his diamonds, his lurid waistcoats, and swell clothes, he put up a wonderful front.

"You could find him almost any day when he was off the road in the lobby of the Broadway Central telling about the big things he'd done.

"A fine fellow, but an awful bluffer, he had a veritable passion for wanting to pose as a hero, and he was always telling some story of an adventure in which he had distinguished himself for bravery.

"One night, Schwartz and I got aboard the World's Fair flier in Chicago bound for the St. Louis Exposition.

"On the same train was Morris Katz, a big St. Louis clothier. Schwartz stuck to Katz like a long-lost brother from the moment he set eyes on him. He made up his mind he'd sell him a bill of goods before St. Louis was reached.

"It happened that Katz wasn't in a buying mood that night, but Schwartz kept at him, sounding him to find his weak points.

Finally he got him going on the subject of wild animals.

"Katz could talk all night about hunting big game. That is where Schwartz's vivid imagination proved valuable. He told Katz how he had risked his life in hunting mountain lions and of fights he had with Western desperadoes, till Katz's eyes fairly bulged. Schwartz pleased him so much that he got a six-thousand-dollar order, with a good chance of another after reaching St. Louis.

"That was the night the World's Fair flier was held up in Illinois by masked bandits. A regular, old-fashioned train-robbery that was, with the robbers going through the sleeping-cars holding up the passengers at the points of revolvers.

"It was wonderful the way everybody gave up. Of course, the bandits didn't have time to stop and search people, yet there were mighty few that didn't hand over everything they had. That's what I did. I gave up two hundred and a watch, and I went through every pocket to see that I hadn't forgotten anything. It makes a man extraordinarily scrupulous when he sees a revolver pointed at his head.

"When the bandit who attended to us got to the end of the car and was about to leave, he suddenly swung around to where Katz and Schwartz were sitting, hesitated an instant, then pointed his gun at the pair and said: 'Did I get yours?'

"'N-n-no, sir,' stammered Schwartz, digging into his pockets, 'you missed us.'

"Schwartz had only forty dollars and a watch and was glad to get off so easily, but poor Katz was heartbroken. He had to hand over a cool thousand in money, and jewelry worth half as much more. He gave Schwartz a look of withering scorn.

"'You jackass!' he hissed. 'I'll take that six-thousand-dollar order back, and I'm thinking of suing you besides.'"

BELOW THE EQUATOR.

IN that great and new field of commerce, South America, hundreds of salesmen from this country have been busy during the last three or four years beating out new paths of trade, and some of them have been having strange experiences to tell the home folks about.

In every gathering place of commercial travelers nowadays, there is sure to be somebody with a South American yarn. For example, there's that story told by Ralph Kennedy, who was sent down there last year by a Brooklyn hat factory.

"It was in Buenos Aires," said Kennedy, "and a great place that is, too. Talk about your live towns! Chicago is as tame and peaceful as a cemetery after getting back from there. I suppose one reason is that there are so many runaway crooks from the 'States' down there. They set a pretty swift pace for the sportive element.

"One of the stores I visited was a prosperous looking place that sold about everything that could be imagined in the line of men's goods and carried a big stock of hats. I got a big surprise on discovering who the proprietor was. He had changed a good deal and had grown a beard, but I had known him too well not to recognize him.

"Perhaps you've heard of Taintor, who skipped out of New York with a big roll of his firm's money about ten years ago. Well, it was Taintor who was running that store.

"He was simply tickled to death to see me, too. He threw his arms around me as if I was a long-lost child. I was the only one of the crowd he used to chum with in New York that he had seen in all those ten years. Would he buy hats? Why, it looked as if he'd have to mortgage his store to pay for the order he gave me.

"He couldn't do enough for me, and I couldn't tell him enough about New York and the boys. All that night we sat up and talked about the old days. He told me he had made a lot of money down there, and was getting richer every year. But he would give every dollar, he said, to be able to get back to New York and see the old faces and the old places again.

"He spoke of his father and his mother and his wife, all of whom had disowned him after his fall, and he didn't even wince when he mentioned them, though he'd always been fond of his wife.

"He could speak of his old friends, too, without a show of any very deep feeling. It seemed to me that he must have become callous during his years as an outcast, for nothing seemed to move him.

"At last we fell to talking of some of our old meeting-places. The favorite one was Tom Noonan's café, in Bleecker Street. He had borne up like a man till then, but he had reached the limit. The thought of Noonan's was too much. He burst into tears.

"'I can't bear to think of it,' he cried. 'I've had the best times of my life there with the boys.'

"So we changed the conversation back to his wife and relatives and before long he got his nerve back."

BACK IN THE BARREL.

"LET me tell you one," said Ed Joyce, one of Chicago's best cereal sellers. "It was down in an Alabama town that I heard this. It seems that old Major Brown, one of the old Southern gentry, had been away from his home for ten years attending to a business in the North.

"One day, while walking about visiting familiar spots, he met Lawrence, an old colored servant, who was overjoyed to see Major Brown again.

"'Lawrence,' said the major, in the course of the talk, 'tell me, what has become of Colonel Trask?'

"'De colonel am dead, sah.'

"'Dead! You don't tell me!' exclaimed Brown with some surprise. 'And he's buried in our old cemetery?'

"'Yes, sah, he's done buried thar.'

"'And my old friend, John Peters?'

"'Well, I'se sorry to say, sah,' went on Lawrence, 'dat Massa Peters am dead, too!'

"'John Peters dead!' The major was astonished. 'What on earth did he die of, Lawrence?'

Lawrence hesitated, but finally mustered up courage. 'Dey do say, sah, dat like Colonel Trask he died of drink.'

"'Well—well,' mused Major Brown. 'Mr. Peters is buried, too, in our old cemetery?'

"'Yes, sah, he is sure buried thar.'

"'Lawrence,' went on the major, 'tell me about my old friend, General Watson.'

"'General Watson am dead, too,' said Lawrence, somewhat tired of the mortuary recital.

"'Watson, dead—dead!' the old major could scarcely control himself. 'My oldest friend. Pray, what did he die of, Lawrence?'

"'Well, sah, dey do say, sah, dat he drank hisself to death, too!'

"The old major was struggling with his grief. 'And he, too, is buried in our old cemetery, Lawrence?'

"'No, sah,' answered Lawrence. 'Dey didn't 'xactly bury him, sah. Dey just poured him back in de barrel.'"

HE TOOK THE TICKETS.

A BUNCH of old-time traveling men were visiting the other evening at a Topeka hotel, and talk turned on to courageous conductors "I have known."

A story was told on John Becker, for years a conductor on the Santa Fe. He was practically awarded the palm for being the bravest "con" who ever set foot on a through Kansas train in the old and perilous days.

One day, just after the Santa Fe had left Dodge City, Becker passed through the car to take up the pasteboards. Two cowboys had boarded the train at Dodge, and Becker went up to them and said: "T-tickets, please."

For an answer the cowboys whipped out big revolvers—the Colts blue-steel brand, .44-caliber, and replied:

"Here they are."

"They're good," said Becker quickly, with a deprecatory wave of his hand, and he passed on through the car. The cowboys chucked their "irons" back into their holsters and settled back comfortably, thinking that the train was theirs.

Becker walked on back to his little wardrobe at the front end of the next car, and, unlocking it, took out a sawed-off double-barreled shotgun, loaded with slugs. He cocked both hammers—for it was before the hammerless automatic days—and, getting the gun properly placed in front of him, he marched back into the car where the cowboys were.

He stepped briskly in front of them and shoved the big gun into their faces, holding it at such an angle that a shot would have swept off the heads of both.

Then he said again, gently: "Your tickets, please."

The hands of the cowboys twitched convulsively toward their pockets, and Becker interjected: "Give me those tickets, please, that have handles, and shove 'em at me with the handles toward me—toward me, understand," he added, bearing down hard with the emphasis on "me."

The tickets came across, with the handles in the requested direction.

"Now dig up the coin," he demanded, "to the next station where we stop."

They dug.

"Now, at the next station you fellows unload. Understand?" The sawed-off was still at a dangerous location, and the hammers still up.

The cowboys nodded vigorously in the affirmative, and they unloaded quickly and without words at the next stop.

Becker made no fuss over the matter; didn't talk about it at all. He just accepted it as a part of the day's business, and seemed to see nothing in it that was extraordinary.—*Kansas City Journal.*

THE COMBUSTIBLE LIMITED.

BY AUGUSTUS WITTFELD.

Experiences of the Hobo Quartette, Expressed by the Aphorism, "Hard Work Ain't No Doughy Sinecure."

THE Battered Brothers of the Rich lounged in non-executive session on a side-tracked gondola-car at Lethargy Landing. Four in number, they had been thrown together by the cosmic swirl which governs the movements of the derelict. Volition to them was a negative factor.

"Say, fellows," remarked Phonograph Pete, "I'll bet that the man who invented work was a professional labor agitator."

"What you want to talk about work for?" growled Sleepy Sam. "You make me tired."

"Aw, shut up, Sleepy," advised Pugilistic Pat. "If you are tired, why don't you take a trip to slumberland? I'm sure if Pete wants to put in a record and furnish us entertainment, he's only following his natural bent. He can't help shooting off his face, and so long as he don't have to work his brain to do it he ain't breaking no by-laws."

"Which," said Sleepy Sam, "does Pete proud, in admitting that he's got such a thing as a brain."

"I rise to a point of order," interrupted Loquacious Louie. "If Pete is prompted to put in a record merely for the sake of standing before his own megaphone and hearing himself vociferate, I protest, but if he can slip in something that possesses the quality of novel entertainment, I'm no protestant."

"What you got on your mind, Pete?" asked Pugilistic Patrick.

"A couple of years ago," began Pete, "I was doing some topographical research work up in Pennsylvania. Investigating the lay of the land with an eye to the future. Locating havens of rest where a fellow might secure three meals and liberty without the consequent ennui of ringing up on the time-clock.

"It was hard work locating the burghs that met the requirements, and I was forced to migrate continually. Most of my traveling was done in the approved and conventional way, but at times I was forced to hit the ties and indulge in pedestrianation.

"One day, after shaking the dust of a bum burgh from my clothes and the constable from my trail, I hit the railroad track a few miles out and waited for the arrival of my private car. There must have been a holiday on the line, for nothing came along, and I was finally forced to locomote by my own powers of locomotion.

"After walking about five miles, I discerned the sky-line of civilization in the distance. About a mile away, to one side of the track, were a number of low frame buildings, completely surrounded by a solid board fence.

"A little farther on, the village loomed into view. It was a fair-looking town, judging from my point of vantage, and I hoped to add it to my list of eligible localities.

"The sight of that likely looking burgh put ginger into my halting footsteps, and I soon arrived at the outskirts. There was a string of cars drawn up on a siding along the fence which surrounded the buildings.

"I was wondering what kind of plant it might be, when on passing a place where the string of cars was broken for about fifteen feet, I saw painted on the fence in huge white letters against a black background:

DANGEROUS! POWDER WORKS

"I quickly put out my pipe, which I was smoking, and stuck it in my pocket. I had no desire to start on an expedition in search of the milkmaids up on the milky way.

"Work, in the abstract, has never appealed to me, and how a man in the full possession of his faculties can associate with a job in a powder factory beats me.

"Just think, fellows, of working along for five days with your eye on the clock, calculating how many more hours it is before pay-day comes around, and then, when the timepiece has only one more lap to go, somebody does a fool thing and the whole outfit blows up, sending you to kingdom come with a full week's pay uncollected."

"I should think," remarked Loquacious Louie, "that a fellow would lose his nerve after being in one of those places when it blows up. I can't understand how a fellow can get his courage together again and resume work after the excitement is over."

"It isn't a question of getting your courage together. It's generally a question of picking out and identifying your own anatomical knickknacks," said Pete.

"Well, I knew from hearsay that a powder works is a sort of slumbering Vesuvius, so I proceeded to disassociate myself from the proximity. I hot-footed it past that open space in the string of cars. As I was passing the last car in the bunch, I happened to look at it, and I nearly jumped out of my socks when I saw a thin wreath of smoke coming from it.

"I did a hundred-yard dash down the track in record time, then stopped. I looked around to see if I could locate any one who was trying to qualify for the 'Nobel Courage Prize,' but the place was shy on candidates.

"Somebody's got to get that car out of there, I told myself, or there's a going to be something doing in the noise line. In my excitement, I called for help, but there was no answer. Then I realized that if anybody was going to do the heroic it was up to your Uncle Pete to get busy.

"I ran back to the car and tried to open the door, but found it locked. I thought that if I could find out what the car contained I could proceed more intelligently with the first-aid stunt, but it was a clean lockout, so I was forced to proceed along other lines.

"I slipped in between the cars and uncoupled the burning one from the next one. Then, looking around, I spied one of those pinch-bars that the train crews use for moving dead cars along the track. I got it and tried to move that car along, but it wouldn't budge.

"The smoke was pouring out in thick volumes by this time, and I realized that I had to get it moving pretty soon or hustle myself out of the danger zone. I worked the bar until I had a crop of blisters on both hands, but the fiery freight was as immovable as a tenement-house rent collector.

"Suddenly, I made the startling discovery that the brakes were set. I ran around to the front end of the car, and climbing up I quickly loosened the brake. Then climbing down, I rushed back, and had that car going in no time.

"After moving it along a few feet, the car started to run of its own accord, and I realized that there was a slight grade at that point, sufficient to allow it to travel by gravity.

"I ran ahead and swung aboard. As I climbed to the top, the flames began to eat their way through the roof, at the rear end. I grasped the brake-wheel and spun it around so as to get control of the car should the grade get too stiff.

"Slowly, my fiery chariot gathered speed, and by the time we struck the village we were exceeding the speed limits. As we struck the crossing, the watchman rushed out of his shanty and made some unintelligible remarks to me, but I kept on going.

"I tried to put on the brakes so as to bring that luminous limited to a stop beyond the built-up section of the town, but I found that the chain had got jammed. Being diametrically opposed to hard work, I quit the job and let her slide. Back in the village, I could see the worthy inhabitants running around and gesticulating wildly.

"I looked ahead and saw that the track was clear for a good stretch, but I also saw that it was down grade, so that there was no possibility of stopping. On we rushed, the wind fanning the flames, but fortunately for me, sweeping them rearward.

"Suddenly, I heard a shrill whistle ahead, and I realized that an engine was on the same track as my car. It had stopped about a mile off, headed the other way.

"'Here's where we make a sensational finish,' I said to myself. Then I heaved a sigh of relief, as I saw the engine get into motion and start down the track. That fellow at the throttle certainly let her out some, but my pyrotechnical Pullman kept gaining on him steadily. I grew interested in the race, and wished that I was close enough to bet with the engineer on the outcome.

"Talk about the mountain of fame being down hill on the other side! That grade had the mountain of fame looking level. Slowly we gained on that engine ahead,

which was speeding like an automobile endeavoring to outdistance a pursuing fine-collector.

"Ahead, in the distance, another town came into view, and I wondered whether there would be a reception committee to greet us.

"That engineer seemed to get an extra burst of speed out of his puffing engine as we neared the town, and just as he struck the outskirts he slacked up, and his fireman jumped. He ran back a short distance, and I saw him desperately trying to throw a switch. He got it over just in time, and my special left the main track.

"I thought we had been going some before, but this new line that they had switched me onto was in a class by itself. The fellows that laid that track must have worked on ladders. You've seen those gravity roads where they pull trains up with a steel cable, and let them run down by holding them back?

"Well, that's the kind of proposition I was up against. At the end of the track, about a mile down, I caught a glimpse of a river, which seemed to be rushing up to meet me, and before I had time to get the mental impression registered, that car-load of fire hit something, and I made a long-distance dive into the watery depths.

"I hit the water and went down about a mile. When I came up, and got the water out of my eyes, I struck out for the shore."

"Say, Pete," interrupted Loquacious Louie, "when and where did you learn to swim?"

"Oh," replied Pete, "I learned to swim before I cut my wisdom teeth. I was born on a canal boat. Well, as I was saying, I struck out for the shore like a bullfrog going a wooing. The car had struck a bumper on the river's edge, and the wreck was burning fiercely. By the time I pulled myself ashore, a crowd had collected to enjoy the fire.

"'Say, sport,' said a fellow who looked like a railroad-man, 'where'd you come from?'

"'Up by the powder-works, about five miles back,' I answered.

"'Powder-works,' said the fellow. 'What powder-works? There ain't no powder-works within twenty miles of this place.'

"'I guess I can read,' I replied. 'Especially when the letters happen to be about five feet high. If that place isn't a powder-works, they ought to take in their sign.'

"The village constable pushed through the crowd, and asked the cause of the trouble. The railroad-looking fellow told him, and advised that he lock me up until they found out how I came to be joy-riding around the country.

"The constable took me before the town burgess. When I told my story he seemed to be favorably impressed.

"'There is one weak point in your story,' he said. 'You claim that this car was standing alongside the powder-works, but there are no powder-works within twenty miles of this place.'

"'But I can take you to them,' I insisted.

"'All right,' he replied. 'How far is it?'

"'About a mile straight up, and five miles back along the line,' I replied.

"'Jake,' he said, turning to the constable, 'hitch up my team, and we'll drive up. I haven't anything particular on hand.'

"Well, we drove up, and finally reached the point where I had started my trip on the combustible limited. The pike ran along the railroad tracks at that point, and as we came opposite the open space in the string of cars, I told Jake to pull up his prancing plugs.

"'There!' I said triumphantly, pointing to the sign. 'What does that mean?'

"The judge and Jake gave a look, and then burst into hilarious laughter.

"'Gosh and hemlock!' laughed the judge, when he could control himself. 'This sure is a joke on you. Come on, Jake. Let's take him over and show him, and then ship him back to Missouri.'

"We all got out of the wagon and crossed the railroad tracks. They took me through the open space in the string of cars, and then the cause of their hilarity broke upon my astonished gaze.

"Painted along the whole length of the fence, in letters like the ones I'd read between the cars, was this:

PEACHBLOW FACE POWDER WORKS WONDERS.

AVOID THE DANGEROUS KINDS.

"When I recovered my faculties, I put distance between myself and that beauty-bulletin. As I faded from the landscape, I heard an explosion in the rear, but it was only Jake and the judge laughing.

"Quite a difference between face-powder and the kind you was thinking of. Hey, Pete?" remarked Loquacious Louie.

"Oh, I don't know," replied Pete. "They are both used to wage warfare on mere man."

A HEART OF THE NORTH.

BY GEORGE VAN SCHAICK.

The Suffering and Hardships of a Long, Lone Journey Through the Canadian Wilderness.

SYNOPSIS OF PREVIOUS CHAPTERS.

PIERRE, a young French-Canadian with Indian blood in his veins, while hunting and trapping in the Canadian woods, rescues Anne Marie, a young Indian girl, and her old father, whose canoe has been upset and demolished by a moose. Father and daughter are badly injured. Pierre takes them to his tent, but the old Indian is so seriously hurt that he dies, and Pierre is left with the girl on his hands. A half-breed and an Indian appear at the camp. This half-breed, Simon, who was the husband of Anne Marie's sister, but who, through his brutality, has killed his wife, is in love with the girl, and tries to make Pierre give her up. This Pierre refuses to do, and the girl and he scheme to escape in the canoe. It seems impossible, and, finally, Anne Marie, whose injuries are very painful, endeavors to make Simon swear on the grave of her father that he will protect her and take her to the home of her cousin, Antoine. Simon promises, but refuses to swear. He insults Pierre, and a fight ensues, in which Pierre succeeds in felling the half-breed and, with the help of the girl, binds him. Anne Marie, after damaging Simon's canoe in such a way that it will take some hours to mend, helps Pierre and the Indian to pack their canoe, and she and Pierre start up the river, leaving the Indian to return and release Simon. Simon and the Indian follow as quickly as possible, but again Pierre conquers the half-breed, in a desperate hand-to-hand fight, and he and his companion are made to take a solemn oath to cease the chase. Anne Marie develops a high fever which promises to delay the two in camp for some time. An inventory of supplies shows Pierre that they have enough to last them for about four weeks. Their journey is beset with sickness, hardships, and lack of food.

CHAPTER IX.

Reaching the Portage.

THEY made camp in a little grove where generations of Indians and voyagers had left signs of their temporary occupancy.

"We haven't gone very far," said Pierre as they were eating their supper, "but you've done better than I supposed you could. Are you very tired, Anne Marie?"

"No, getting better fast. I'm hungry, too."

They laughed happily and enjoyed their meal to the utmost.

"We'll do still better to-morrow," he said.

She looked at the sky before answering.

"Much rain coming," she announced.

Pierre looked up too and shook his head.

"I suppose you know," he said doubtfully, "but I can't see any signs of it."

There was a moderate breeze from the southeast, and it was rather less cold than for a few days back. A little rain, however, would make no-difference.

But next morning it was coming down in torrents; it was a regular deluge. They waited for some time and Pierre decided that he might as well carry some of the things over. Anne Marie had arisen somewhat stiff and lame, and remained within the tent as he started off with the canoe. On his return, in less than half an hour, he was drenched to the skin.

"I wouldn't mind starting," he said, "but I'm afraid a soaking would not be very good for you. It might be a good idea to stay here to-day. This rain won't last forever, and you're getting stronger all the time. In a few days it will not matter whether you get wet or not."

She nodded impassively. What did it matter to her whether she went or not. She was happy, and did not want to see the ending of these days.

"As you wish," she said.

"But it is not as I wish. I'd like to start," he put in rather impatiently. "It's just for your good. If you got thoroughly wet and chilled now you might be ill again."

"Of course, you know best about these things," she answered quietly.

It really seemed as if they had decided wisely, for all day it poured frightfully. Pierre took some more loads over the portage, during intervals when there was a lull in the storm, and stored them under the overturned canoe.

The river was rising fast.

"Big rains in the North," remarked the girl.

"Yes, it must have been coming down for several days up there, to be sure."

The next day, to Pierre's intense disappointment, conditions were just as bad, and he decided to wait longer. The girl was evidently improving fast; she seemed to be casting away her illness and to be emerging from it with renewed vigor.

But she was no longer idle now. Pierre had a little package containing needles, buttons, and various spools of thread, which his mother had put up for him, and Anne Marie appropriated it for the common good. With strong waxed thread she repaired her moccasins, and their clothing showed various rents that claimed her attention.

Pierre was now the idle one, lying down in the tent and smoking his pipe while she worked, and no longer feeling the irksome dulness he had experienced in the previous big rain; it seemed to him that he had found a pleasant companion. Besides, he was no longer a prisoner, kept in duress by the girl's illness.

He could have gone on if he had wished to; it made all the difference. In fact, he was permeated by a strange peaceful sensation, as of something homelike.

Here he sat, with his soft camp moccasins on his feet, and near him was a little housekeeper, radiating about her a certain charm of her own. He was thoroughly happy, and there was nothing incongruous in the thought that came to him, that they were there quietly enjoying life, and that if some things had been otherwise, he might have chosen that life and that woman for his own.

"My goodness," he suddenly exclaimed in English, "think of what the *mater* and the old man would say!"

Anne Marie looked up.

"I do not understand," she said.

"No, you don't understand, Ou-memeou. Probably you never will. I had thoughts that came out loud, about things that are far away."

"Yes, I see," she answered, looking at him gravely, as though still seeking to fathom the unsolvable mystery of her chance companion.

In his voice there was a caress, to her, and in the mere touch of his finger something that made her heart beat, and her cheeks feel warmer. She slowly shook her head. It was not to be understood.

The day passed, and on the next it was still raining, but less hard, and they decided to start. Anne Marie got over the portage without any trouble. She was wrapped up in the water-proof ground cloth. This she had refused at first, caring nothing for the rain, but Pierre had insisted and she obeyed, as always.

They traveled all day, with only one small portage which was passed in a few minutes. The river was still rising and the current becoming a powerful turbid flood. Often, in rapid places, Pierre would have hesitated if the girl had not always known the proper course with unerring instinct. At times she arose, looked for a moment down the stream and at once pointed with her hand. The canoe, previously held back a little, would shoot forward, pitch a few times over waves caused by deeply sunken rocks, and glide into smoother water.

Another day came and the rain at length stopped, but the sky was clouded and a cold wind was bending the tree-tops. When Anne Marie came out of the tent she looked up in the north, with a serious expression.

"Maybe snow is coming soon," she said. "We must not stop any more."

"Oh, the snow won't hurt us," he replied, "and we'll be at Lac St. Jean in ten days."

"I will paddle," she declared. "I am much stronger now."

He assented with a nod, rather non-committal. The fact was that she looked quite well again. She stood erect as an arrow, lithe and graceful, and her breathing came quietly, easily, as if nothing had ever been the matter with her.

She was happy when she took a paddle and knelt in the bow. It seemed as if all the hard days had been left behind.

"I expect we'll never need all that meat," he asserted as they were gliding down a stretch of smooth water. "I wonder whether I might not leave some of it behind. It will be that much less to carry, and we'll get on so much faster."

"No, never leave food," she answered.

A little over thirty miles were covered that day, and on the following morning it was very cold. Near the bank there was a little film of ice over the water. They made an early start and Pierre was surprised to see how strongly the girl handled the paddle.

Every half hour or so he wanted to change sides, and to relieve the cramp in his toes and knees by shifting his position; she always complied, but never asked for a change first. With an easy sweep her arms moved to and fro, and whenever they changed their direction, or went down rapid places, it was a pleasure to see the skill with which she directed the canoe.

This manner of traveling was easy—there was a companionship in it, a community of effort that was very pleasant. At the next portage she quietly put a good load upon her strong young back, and smiled quietly when he remonstrated with her.

Late that afternoon they came to a rapid that could usually be easily shot in the canoe. Ordinarily high water permits of easier descent of bad places, but here the great rocks that were now just submerged made great dangerous whirlpools.

"*A terre!*" cried Anne Marie, giving a deft sweep toward the shore.

Having landed on the bank, they descended it on foot for a few yards, for a better look at the wild water. Anne Marie studied the situation and then shook her head.

"It is not safe," she said. "The current is too violent to enable us to keep clear of the rocks now."

"Oh, let's try it," he said, "we'll get through all right."

"The canoe is small and heavily loaded," she answered, "but we will if you want to."

She was deferring to him, loath as usual to pit her judgment against his, but he looked at her and smiled.

"You know best, child," he said. "Come on, we'll carry over."

It pleased him to think that this queer girl knew just what was best to do and yet was willing to abide by his desires. She was plucky to the very bones of her, and danger existed for her only as something that interfered with traveling, and which it would be bad woodcraft to run into.

"There is no regular portage here," she said.

Pierre took his ax and, followed by the girl, went down to survey the best way. He cut down a few alders and saplings that would have been troublesome, and then returned for the baggage.

They carried all the stuff down between them, leaving the canoe for the last. With the usual look around, to see that nothing had been forgotten, he took it up and went on, followed by the girl who was carrying the stove, and by Paddy, who was always at Anne Marie's heels.

The way lay through a bit of fir and spruce growth, emerging into an alder covered bit, and then leading along shore, over a hard rocky place where the footing was none too secure.

To the left the water was boiling, a very caldron of wild tearing waves splitting thunderously against the jagged rocks and then smoothing down into great tourniquets that deepened and filled up again at intervals.

It was a grand sight, and for a moment Pierre stood on a rock protruding from the bank. He then took a long step to reach another stone, but this moved under his weight and he made a violent effort to gain his footing farther on.

He reached it but with the toe of his boot and slipped, and in a moment the weight upon his shoulders had borne him with a crash into the wild water.

The girl shrieked as she saw him fall, and ran down as fast as she could. She saw him swept in the swirl of rough waters. The canoe had fallen away from him and he made an effort to grasp it, but it was whirled out of his reach.

He struck for the shore, but the crushing weight of the water bore him under several times. He came up gasping, but full of fight, and with a magnificent sweep of his strong arms neared the shore. A wave lifted him like a feather and beat him down upon a rock, and his body seemed to become suddenly limp.

A few yards farther down he was carried among the branches of a big fir that had fallen in the water, with its roots still fast to the bank.

Anne Marie leaped upon the trunk and grasped him by his coat-collar, pulling him up with a strength that was marvelous to behold. He helped himself a little, and finally the two made their way to the bank, where he sat under a tree, dazed, with blood flowing from a big cut upon his forehead.

"Nearly a fair knock-out," he muttered; and then, suddenly, the matter of greatest import came uppermost in his mind.

"Where's the canoe?" he cried, his voice torn with anxiety.

Farther down, out in the rapids, the little

craft had been jammed at the bow between two rocks, and the sweep of the current was forcing the stern around. They watched it with beating hearts, for it was like a living thing that fought for its life.

In the roaring of the waters they heard nothing, but could imagine that it cracked and moaned like a thing in pain. Gradually the stern twisted around, farther and farther, still resisting, and suddenly something gave way, and the canoe broke in the middle, and as a flash became a misshapen object, a mere carcass, a few ribs of which were sticking out of the water, which in a few minutes would complete its work of destruction.

Pierre had not felt the hurt he had received. He was not even aware that he was shivering with the cold and with the shock to his nerves. He merely sat there, looking at the sad wreck out in the boiling river, the significance of the accident gradually dawning upon him.

"How'll we get back now?" he asked despondently.

As he sat there the girl stood before him, mopping his bloody forehead with the red handkerchief she had taken from around her neck. She had remained silent, and even the wreck of the canoe had taken her attention for but a moment. She was looking at him, thankful that his life was saved, sorrowing that he was hurt, full of a deep concern for him. Suddenly tears came in her eyes.

"It is my fault," she said. "Perhaps we could have shot it from the other shore."

He looked at the wild water and shook his head. Then his eyes fell upon her and he saw her tears, and at once the sturdy strength of his forefathers came back to him.

"Never mind, *ma petite*," he said, "we might have been drowned."

He stopped to pat the dog's head. Paddy had his forefeet upon his knee, and was licking his hand.

"Come," said Anne Marie, "we must light a fire and get dry."

He followed her, casting another look at the bit of wreckage still jammed between two rocks, and they quickly made their way to where all their baggage lay piled up, ready for embarkation.

They had to open one of the bags to look for matches, for the few Pierre had in his pockets were soaked. His teeth were chattering with the cold, but he took the ax and chopped lustily. A great fire was soon burning, and its heat was grateful.

He stood before it, warming himself, while the girl sought out his few spare clothes. While he put them on she boiled water for tea and busied herself making camp. She did it more rapidly than he could have managed it.

In her hands the little ax hastily fashioned tent-pegs, and before the kettle boiled their little silken home was erected.

It pleased her to wait upon him, and her attentions were grateful. He sat down by the fire, with one of the blankets wrapped around him. The wet clothes were hanging on poles just near enough to the fire to dry without burning. The scalding hot cup of tea she handed him comforted him greatly. His hat had disappeared in the river, and around his brow he wore the handkerchief with which Anne Marie had stanched the bleeding.

She attempted to lift one of the heavy bags within the tent, and gave a little cry of pain. It awakened him out of the sort of apathy in which he had momentarily fallen.

"Don't move those bags, Anne Marie. You're not strong enough for that sort of thing yet."

"I want to help," she answered sadly.

"You've helped enough, Ou-memeou. You're a better fellow in the woods than most men I've traveled with. We'll get out of this mess somehow."

She was standing before him, and he smiled as he placed his hand on her shoulder.

Then Anne Marie became happy again, for she cared not where she might be, or what might happen, so long as this man was with her, so she could do his bidding and care for him, and so she could share his hardships.

When he had disappeared in the white water her heart had stopped beating, and she had felt that her very life was being torn away from her by the crushing waves that were carrying off this man, who was not like other men.

Blithely she went to work. The ordinary details of life must be attended to, and a meal had to be made ready.

"Don't bother," he said. "I can cook supper."

And then for the first time she rebelled.

"I am well now, and strong. It is the woman's work to cook and to work and to carry what she can. You have done all the work these many days, and now I want my share. I do not want to be despised."

"You're a wonder, Ou-memeou. Please yourself; but if you get sick again, don't blame me."

He was laughing then; and she laughed,

too, for she was happy to see him himself again.

"I'll have a great story to tell my friends," he declared, "after I get back to stones and brick."

She did not quite understand the latter part of his sentence; but the mention of his return to his friends seemed to hurt some little sensitive fiber within her heart, for she bit her lip and turned away quietly. Yes, he would get away from this land of hers, back to men and women of another world, and she would see him no more.

Yet it all seemed distant, like the death that comes to all, or the end of the world she had heard predicted. It saddened her, but gave no acute pain; it was one of the hard things of life, like the frost-bites of winter and the hunger of barren places, to be endured when they come, a part of existence.

For the rest of the day she turned her hands to every bit of work she could find to do. He wanted to get away, and she would help to the utmost; she owed him pretty nearly all the kindness and gentleness she had ever met with, and was anxious to repay.

At one time she was sewing rabbit-skins together, and Paddy came up to her. His master had wandered away in the woods to set snares.

She took the dog's rough head in her hands, and put his cold nose against her cheek.

"You will go with him, Paddy, and I will be all alone," she said.

But the dog only wagged his stumpy tail, and, hearing his master's footsteps, ran away to him.

As it began to grow dark, she spoke.

"There are people waiting for you where you live?" she inquired.

"Why, yes, my father and mother," he said, "and I'm afraid they'll be rather anxious before they see me again."

"No wife and little children?"

"Why, no—I'm not married," he laughed.

This seemed to cheer her up, for some reason that she did not fathom, since, strange to say, the idea had not at all materialized itself in her mind that this man could ever belong to her.

All that she knew was that she was happy in his presence, and that his going away would be a miserable ending to a life that, to her, was full of an ineffable charm.

They had both avoided the problem of the future, but it had to be solved. They could not remain where they were, and some means of travel had to be devised. As they sat under the tent, with the little stove burning cheerfully, Pierre lit his pipe and began to ask questions.

"Can we build another canoe, Anne Marie? I suppose you know how?"

"Yes, I know; but there is no birch-bark large enough in this part of the country. And it should be the bark of spring-time."

"Then what are we to do?"

"If we had birch-bark it would take nearly two weeks," she replied. "We have no *couteau croche,* nothing but the ax and two knives. We must make a raft."

"A raft—just the thing! We will float down."

"Hard work," she continued. "We must make a new one at every portage."

"True," he answered. "We have enough to carry without pulling logs over all the carries."

"We can shoot no rapids," she continued, "and we must land before we get to the head of most portages."

"Yes, they're nearly all near swift water," he assented. "It's lucky I got that meat."

The young man was restless before he slept that night. He realized the difficulties of a rafting trip down the river, with the cold weather coming on, and the food question becoming important again. When he awoke in the morning, the girl was already out of the tent, cooking breakfast.

They had a bite to eat, hurriedly, and Pierre went to look for suitable trees, and picked out dead ones that would float light, but that were not decayed. There were plenty of them, and he cut lengths of about twenty-five feet, and carried them to the shore.

It took him a great deal longer to make his raft than he had expected. There was no auger to bore holes with in order to peg cross-pieces, and he puzzled for some time over the best way to fasten the logs solidly together.

He split a young birch and made six pieces about seven feet long, of which he passed three under his logs, at right angles with them, while three were placed over them. All that was necessary was to fasten the protruding ends strongly together. To do this he cut long strips from the caribou hide that had been kept.

The morning was well advanced before the clumsy craft, about six feet wide and twenty-five feet long, was completed. In the meanwhile Anne Marie had made a big paddle with his hunting knife, and had cut a couple of poles.

During all this time he had been working up to his knees in the water and felt the cold keenly. He then went to work to load his raft, feeling somewhat uncertain as to whether it would be buoyant enough, but found that all the equipment and provisions, besides their combined weight, did not sink it too deeply.

It bothered him to think that this job would have to be repeated at every portage and at many bits of rapid water that could easily have been shot in the canoe, but would prove too shallow or too rocky for the raft. With practise the others might be built more easily, but again he might not always find the right sort of trees at hand, or shallow water in which to work.

His activities once aroused, however, he easily became sanguine, and felt quite cheerful when they started. The food question bothered him only a little. Anne Marie could set snares for rabbits and catch fish while he worked at his rafts.

He knew he could not count on any more big game, excepting by the greatest luck. It would be scarcer as they traveled farther south. Well, it was one more experience, another fight to be waged, and he did not doubt for a moment that he would win.

The waterproof ground cloth had been stretched over the middle of the raft and the dunnage piled upon it. Paddy ran from one end to the other, enjoying a method of travel that gave him so much freedom.

They floated down easily, though slowly, and Anne Marie constantly watched and pointed out the places where the current was swiftest. It was of little use to try and propel the raft, for the greatest exertion of pole and paddle made apparently little difference in their speed.

Sometimes they had to observe the shore carefully to see that they were progressing at all, and then, with swifter water, the raft would go faster for a while, and Pierre could not help thinking how rapidly they would have traveled in the canoe.

"It's slow work, Anne Marie," he called to the girl, who was sitting forward.

"We travel," she answered. "We are not standing still. The hours carry us nearer to the end."

"Yes, I suppose we are going home," he assented.

"Look out for the sand-bar," she cried, pointing ahead.

The river was wide and the current slow at this place, and they were drifting over a shallow spot. They tried hard to push out farther in the river, but soon grounded. Pierre jumped in the water, less than a foot deep, and the girl did likewise.

The lessened weight made but little difference, and inch by inch they managed to push on for thirty or forty yards, using their poles as levers under the raft. This took nearly an hour, and then they floated freely again for a short time, and became fast once more. The water was a little deeper, however, and by walking alongside and pushing they made progress, though very slowly. It took them until nearly sundown to get over about a mile of shoals and into deep water again.

"How far to the next portage?" asked Pierre.

"About three miles."

"Had we better go on?"

"Yes, it is an easy landing, with a sandy place."

They went on, while it grew darker and darker, and Anne Marie stood up ahead, watching.

"We must cross the river," she said, "the portage is on the other side."

With poles and paddle they forced the heavy raft over, and finally made the landing and unloaded it. While Anne Marie made camp, Pierre unfastened the knots and took the lashings and the cross-pieces, to use on the next raft.

Before eating, in the semidarkness, they carried some of the things over the carry in order to save time on the morrow.

"We've got to work hard on land now," he remarked, "and rest on the rafts when the blessed things consent to float."

CHAPTER X.

Turning the Tables.

BEFORE sunrise, they labored hard carrying things over the portage. Anne Marie was becoming visibly stronger day by day, and insisted on doing some of this work. But after they had taken everything as far as the lower landing-place, they decided that the water was too deep and rapid to permit the building of a raft there; they had to make their way down the bank for quite a distance, through an awful tangle of alders and brush, before reaching a suitable place.

Here it was quite a job to find the necessary logs, and the girl chopped down the trees, while Pierre carried them to the bank. This accomplished, the making of the raft did not take very long.

They had risen in the dark, at five, and by half-past nine they were able to load and get started, knowing that they would have several miles of clear water before reaching the next falls.

Pierre had rigged up a mast a little forward of amidship, and the ground cloth was fastened above to a crosstree, while the lower ends were tied to ropes. These were carried back and attached to the sides of the raft.

This did very well at the start, but after a couple of miles a change in the wind and bends in the river rendered it useless, and it had to be taken down. They had not been able to see that at any time it increased their speed very materially.

In this long stretch of the river the current was quite slow, notwithstanding the high water, and their progress was tedious. After a couple of hours the wind served them again, and they put up the sail once more, but it drove them hard over a shallow place, which it took them more than an hour to clear, and which they might have been able to avoid if the sail had not made the steering harder.

The day was a cloudy, gloomy one, and before they were clear of the shoals it began to rain. They were soon soaking wet. In pushing the raft some of the crosspieces began to get loose, and they had to be tied up again, Pierre working with his arms under water. At noon they landed and took some hot tea, starting off again in the cold downpour.

By sundown they managed to reach the end of their day's journey at the next portage. They were rather pleased, having made ten or twelve miles during the day. As soon as they were ashore, Pierre began to take loads over the short carry, making four trips in all.

Each time he was accompanied by Anne Marie, and they camped at the lower end; but when he stopped, Pierre was utterly exhausted. For some reason the tump-line seemed to strain his neck as it never had done before, and on each trip he had to put down his load several times, owing to the pain. He was compelled to sit down under the tent while Anne Marie made tea and cooked.

He fell asleep as soon as he had eaten, feeling quite played out, but awoke soon with an awful pain in his neck and back, and during the remainder of the night he slept no more. He was feverish and restless, and tossed about, though aware that every movement increased his agony.

Although trying hard not to disturb the girl, she awoke; and he was so ill that it was a comfort to hear her stirring, and to have her ask what the matter was.

"You have worked too hard," she said, "and now you have the pains that come from being wet all the time."

"Yes, I suppose it's some sort of rheumatism," he said. "But you can't help me, girl, and you had better try to go to sleep again."

But she would not hear of this, and went out in the darkness and the rain to get wood, and he heard her chopping. Then she came in with several armfuls of heavy sticks, and cut them again in the tent to get dry kindling. She soon made a fire in the stove, placing wet sticks on top of it in order to dry them a little.

His teeth had been chattering, and the fire was comforting. Anne Marie unfastened a few buttons of his shirt and rubbed his neck gently as she sat by him in the dark, with only occasional tiny bits of light that came from the half-opened door of the stove. It soothed the pain to some extent, but after a while it was as bad as ever, and he could hardly bear it.

"Why don't you take some of the medicine you gave me to make me sleep when I had the bad pain in my side?" she asked him.

He had not thought of that, and she managed to find the little case with the tiny vials. She lit their remaining candle for a few minutes, during which she handed him the little bottles one by one.

He selected the proper one, and took two of the tablets. It was very long, it seemed to him, before he could get asleep. Most of the time he was lying in a semiconscious state, aware of the pain, but not feeling it much. He remained quiet, however; and after several hours Anne Marie, who had been watching him in the dark, also fell asleep.

When he awoke the sun had been up at least an hour, but could not be seen, for it was still raining. Anne Marie was not in the tent. The pain was not quite as bad as it had been during the night, but when he tried to sit up he found it quite impossible.

All the muscles of his back seemed to be stiffened into sensitive masses. He called, but the girl did not answer; and suddenly the idea came into his mind that he had been forsaken, that she had gone and left him alone in his helplessness and misery. But he realized the absurdity of the thought.

All the provisions were there under the tent. He waited patiently, and even dozed

again for some minutes, being conscious of a disagreeable heavy feeling in his head and a sick sensation in his stomach, probably due to the opium.

He smiled at her when she finally came in, dripping, with her long black hair hanging in strings over her face. It seemed to him as if never in his life he had felt so glad to see any one. But when he tried to move one of his arms there was a terrible aching in his shoulder, and the hand dropped down.

"You are awake," she said. "Do you feel better?"

"It's my turn now, Anne Marie. I can't move. What awful luck."

"You will be all right again in a few days," she answered soothingly.

"A few days!" he cried out. "Won't I be able to travel to-morrow? Am I going to be tied up here by this deuced pain? I'm willing to keep still to-day, but to-morrow I go; do you hear?"

He was impatient and restless and spoke roughly, as if she had been at fault.

"You may still be too sore to go on to-morrow," she ventured.

"I don't care—I'll go to-morrow; but just now I simply can't move. Where have you been?"

"Fishing," she answered.

"Oh, you've been fishing, have you?" he retorted angrily. "I hope you've had some fun."

He was quite indignant. She was fishing while he suffered, while he needed her. She should have remained near him.

"We need provisions," she replied gently. "We have to save now."

From the hem of her rough skirt the water was dripping. Her face was glistening with the wet—she was quite soaked through.

"You poor girl!" he exclaimed contritely. "I'm sorry I said that."

Impulsively she knelt by him, and lifting one of his hands in her own, she stroked it, as if he had been a child.

"You are too good," she said. "It is my turn to work for you."

For some reason he could not explain, this made him feel uncomfortable; but her sympathy was good, and comforted him.

"Did you catch any fish?" he asked.

"Yes, three *dorée,*" she answered.

He smiled, and the girl arose to get breakfast for him. She brought him some boiled fish and a cup of tea. He enjoyed the hot drink, and tried to eat a little, but he had no taste for food.

That day was desperately long and slow. Anne Marie went out again several times to look at her lines and to set rabbit-snares, but she never remained away long; and whenever she returned he was pleased to see her and glad of her presence.

On the next day he was quite unable to move. The girl rubbed his neck and shoulders, and sat by him most of the time, sewing skins together or mending clothes. He liked to have her there, to talk to him and wait on him; and whenever she went away, even for a short time, he longed for her companionship. Several times he became grumpy and impatient, but she did not appear to notice it.

Five days in all passed away before he was able to move about, and then he determined to start at once. The weather had become clear and cold, and winter was announcing its near arrival. He took his ax, and went to work to make logs for the raft, but had to stop before he had half cut down a dead spruce whose top rested on some birches upon which it had fallen.

Anne Marie quietly took the ax from him, and he sat down, feeling piteously weak and disabled. After she had made the logs he arose again to help her take them down to the water's edge. He remembered how, the week before, he had swung them upon his shoulder and carried them so easily.

With the girl's help, she doing most of the work, he managed to get three of them to the shore and then sat down, exhausted. He persisted, however, but it took till evening to get the raft made. Anne Marie went up to her knees in the water to tie the crosspieces together. He had angrily forbidden her to do so, but she came to him and placed her hand on his shoulder, and smiled.

"You are the sick one now," she asserted gently. "I am well and strong, and more used to this life than you. Please let me work."

She had jumped in the water without waiting for his consent, and tied her knots more strongly and deftly than he had done. They fastened the raft solidly to the shore, ready for the next day's journey.

When they started, their load was increased by a few pounds of smoked fish and some rabbits. The next carry was not very far away, and when they landed Pierre found himself unable to carry heavy loads. The muscles of his head and neck resented the labor demanded of them. Twenty-five or thirty pounds was all that he could manage at a time. Anne Marie took his tump-line without heeding his protests, lifted full a hun-

dred pounds to her broad little back, and walked off with it.

"It is too much for you," he objected.

"I have had much rest," she replied. "I think sometimes you forget I am a savage. I have carried ever since I was a little girl. We take babies first, then food and traps, and, later on, babies again, but with heavier loads besides, and we paddle and skin and cook, and then we grow old and die."

She spoke simply, as one knowing that no other life was possible for her kind, and carried her load willingly, because that was one of the functions of the women of her race, and she was always surprised when Pierre tried to save her from too much toil.

What was there in life beyond this? As she walked on, bent under her load, she fancied that if this man had always been with her the labor would have been light and easy, its weariness nothing when shared with him, when rewarded by a word from him. This kind of idea, frequent with her now, was yet shapeless and unformed.

Principally she was like Paddy, conscious merely of present happiness; but, unlike him, she was made uneasy by the knowledge that it would not last, and a chilly feeling would strike through her heart, and the load upon her back then seemed to crush her in a strange way.

At the lower end of the carry a small stream entered the river, and they had to get across it to find trees for a new raft. It was quite deep and turbulent as a result of the recent rains, and they had to travel up its banks for some time before they found a place where they could get over it.

It took them over two hours to get all their things across and back again to the main shore. They had more trouble in making this raft than they had experienced before. Suitable trees were rather far apart, and the shore lent itself but poorly to the building of their craft.

They had to keep the logs together by sinking poles a couple of yards out into the river-bed, as the current threatened to carry them away. It was a hard job to tie on the crosspieces. After this was done the baggage had to be taken down a slippery bank, where their feet sank deeply in greasy blue clay.

For a mile after they started they went at a good pace, and then they reached a place where there were several islands, and entered a tortuous channel between two of them.

After going a hundred yards, they found the passage barred by a huge tree that had fallen across it. As soon as they saw it they dug their poles in the bottom of the river, to stop their headway.

The tree was too large to make it practical to cut it in the middle, and they had to go back against the current to find another way. The water was rather deep, and, though not very swift, it took them a long time and much strenuous labor to push their clumsy ship up-stream until they reached another passage.

When they stopped, they were both quite exhausted, and glad, indeed, to sit on the raft again and direct its course with poles and paddles down the unending river, every fall and rapid of which had become an enemy to their progress, instead of a thing of beauty.

That night, when they stopped, they had only managed to make about seven miles. It was rather discouraging.

"At this rate it will take us till Christmas," said Pierre rather gloomily.

"We will have ice and heavy snow long before that," replied Anne Marie. "But we will have better days than this. To-morrow we reach the forks, and then there are hardly any carries, all the way to Tschotagama, only shallow places at times, and some swift waters."

CHAPTER XI.

The Toil of Travel.

IN the next ten days they made nearly two hundred miles. The weather had become stormy, and during all that time they lived night and day in wet clothes. Several light flurries of snow had betokened the need for haste. Everything was saturated, excepting the contents of the waterproof bags.

They had to build several rafts, while at other times they could unfasten the logs and float them over shoals and tie them together again lower down. They passed long expanses of barren land, abandoned by beasts and birds, and this dreariness corroded Pierre's soul. But the girl, though usually grave and taciturn, always stood by him, doing her work with such courage that he could not help admiring her.

He felt that she had become a splendid pal, and, prompted by an affectionate nature, the young man's conduct toward her daily became more friendly.

He always called her Ou-memeou, or translated the word in French and addressed her as *Tourterelle*. Often, while standing up on the raft, and discussing the all-important

matter of where the deepest water was ahead, his hand would rest upon her shoulder for a minute, as she pointed to some spot on the river.

Slowly, unconsciously, he began to feel that he would be sorry to end the trip. As a journey it certainly was beastly hard; but there was a keen enjoyment in the presence of that girl, and in the fact that he realized he was becoming, under some subtle influence, a stronger and better man.

If she had only been of his race he would have taken her to his heart, with all her poverty and ignorance of his world, of that world to which he still was tied, and that bound him with conventions too strong to be severed. He sometimes spoke of his life in the cities, and Ou-memeou seemed always eager to hear about it.

"I should like to see such places," she said once, "but it must be very dreadful to be always away from laughing waters and from the song that comes out of the woodland."

"You would die, *Tourterelle,*" he answered, "if you were caged in a city. It is not for a little wild bird like you."

"But you, you love the forest, why do you stay in those towns?"

"Why, Ou-memeou?. I cannot tell why, except that my people live there."

And he pondered long over this in silence, as they floated on the river, and the question kept on recurring, and at times he felt that he knew not really why. Whether the blood of Farquhar's wife beckoned to him, or real love was preparing him, or the glory of the wilderness appealed to him, he could not tell. He knew that the girl's query was daily becoming harder to answer, and gradually he felt that one bond was becoming looser, and that another was tightening around him.

Just as the flood carried them down, so he seemed to be upon a current that led away from his old life, not toward wealth or ease, but toward something else—greater, stronger, better suited to the thews and sinews of a real man.

Although they had long sleeps and a sufficiency of food, they became haggard and worn with the weary grind of it all. Anne Marie now did her full share of all the work, and it seemed to tire her less than her companion.

At any rate, she did not seem as exhausted when night came. Pierre became used to the idea of her working so hard, and was glad to have her attend to the dreary labor of cooking and cleaning the few dishes they had.

The flour-bag was very low now, and they cooked no more bread. Sodden pancakes, made in the frying-pan, were more filling and easier to prepare. They hardly caught any fish, and the rabbits seemed few and far between, though they set snares nearly every night.

Paddy was dispirited. He had grown thin and lanky, although he had always received his full share of food. Never did he seem now to bark for the very joy of living, as formerly. His rather discriminating appetite had given way to a wolfish hunger for anything that could possibly be eaten.

The two sometimes remained nearly the whole day without speaking. The hardship of it all had deprived the man of none of his pluck; but his endurance was sapped to some extent, and he went ahead doggedly.

Along some portions of the river they had to make paths for themselves, where they dared not trust a raft in the rapids that would so easily have borne a canoe, knowing that the striking of a single boulder would mean the loss of all the provisions, and possibly their own death. On such occasions Anne Marie always went first.

She had an instinct that always enabled her to select the easiest going. But the best was seldom even fair. There were stretches of swamp in which they sank to their knees, and tangles of trees harvested by the great north winds, and burnt lands so covered with an abomination of low growth and charred fallen trunks that it took them hours at times to make a few hundred yards.

These dreadful journeys had to be repeated until their whole equipment was transported. Little by little they had discarded everything that was not absolutely necessary.

"There's no use in lugging these steel traps, Anne Marie," he had said. "I know they're about all you own in the world, but, after all, they're not worth much. I'll get you others when we get to Lac St. Jean."

Anne Marie had flung away the traps, and Pierre had thrown away most of his ammunition and fishing tackle. His little mirror went, also his shaving things.

Finally they reached a place only about ten miles above where the Peribonka, making a graceful sweep, allows some of its waters to run off to the left and fill Lake Tschotagama.

"There's a way down the lake and into a river, all the way to Chicoutimi, I understand," said Pierre.

"If the wind was right we could sail a raft down through the lake," said the girl, "but the river is small and bad."

"Yes, I suppose we had better keep on down the Peribonka," he replied. "We'll be all right when we get down to the first falls. There we can get provisions, and after that we can float down to the mouth of the river and get a steamer, or find horses."

"From here, with a light canoe, we could go down in two days or a little over," said the girl.

"I'd give five hundred dollars for one, and say thank you," he asserted.

November had come, and the next day there was quite a fall of snow. For an hour or two it came down quite heavily, a dry feathery cloud that whirled thickly over them, so that they could see but a short distance ahead, and which, after it passed off, left the mantle of winter upon the ground.

Pierre thought of the joys of boyhood when the first coming of snow spoke of winter sports. It would send him to the loft where skates, toboggans, and snow-shoes had been put away during the summer.

But this time, when the downy flakes first came, he had stared at the girl, shaking his head, and she had looked at him. They had gone through so much, and now this seemed like another obstacle rising up before them, a harbinger of cold they were ill prepared to meet, of ice that might interfere with their journey, and, perhaps, of hunger whose pangs they might soon have nothing left to appease.

"We're in for it," he said.

"We must spare a day or two and fix things for cold weather," she answered.

Between them they had a double blanket and four single ones, and Anne Marie went to work with Pierre's knife and cut out some pieces with which she made rough mitts. The provisions had dwindled enough to permit of their being packed in two of the waterproof bags, with their little spare clothing.

This left two empty ones; in which they made a slit in the bottom and armholes at the sides. They could be drawn over the head like pouches and would keep out the water and wind. But this left a lot of stiff unyielding material around the neck, and the girl cut some of it away and did a bit of clever sewing. What was left of the caribou hide, ill-prepared though it was, served to make two pair of mocassins.

This took nearly a whole day, for Pierre could give but little help. The waterproof bags worn over their clothing would keep their bodies warm, but the arms would suffer, and so they attached sleeves made of blanketing.

In the evening, and all that night, the cold increased, and in the morning it was freezing hard. They had to break ice near the shore to get away, and the water froze on the poles and covered the raft with ice, wherever it splashed upon it.

It was a very sudden coming of winter weather. If this cold were to last the river would soon freeze over.

Pierre noticed that the girl was less well-protected than she should have been. Her winter clothing had been lost in the wreck of her canoe, and she possessed but a thin woolen skirt. A large piece of the blanket that had already been cut into was left, and he insisted that she should make a pair of trousers for herself out of it.

She worked while they floated down the river, and in the evening when they landed. By early morning she had finished a rough garment. The stove going at night, would keep them comfortable in the tent.

They reached Lake Tschotagama before dark, and Pierre pushed the raft out of the strong current, turned to the left and entered the narrow opening into the lake. On the right side there is a little bluff, twenty-five or thirty feet high, upon which they decided to camp.

This was the usual limit of tourists' journeys up the river, and they found plenty of traces of former occupancy. A large tree had been broadly blazed, and some names were penciled upon the white wood.

It seemed like getting in touch again with civilization to find that these men from New York and other big cities had been fishing there, unless several empty whisky bottles strewn around the site of the camp had interfered with this pursuit. But Pierre felt disgruntled to think that if he had a canoe he could easily have been down to the first falls in two days.

A survey of the remaining provisions left him somewhat anxious. They would last, at the present rate, perhaps eight or nine days more, although there was a good deal of tea. There were ten falls below Lake Tschotagama, besides some rapids over which they would not be able to take a raft. Each one of these meant the building of a new craft, and they had discovered that on an average they could not make more than one a day and do any traveling also.

If the river were to freeze over they would have to walk. This would be easier and faster than rafting if the ice should be

solid, but they knew that it would take a long time to make it fit to bear their weight for long distances, though it would interfere with the raft.

Wherever the water was rapid they would have to walk alongshore, for in such places the ice would not make till late in winter.

As they had their supper under the tent, that evening, Pierre suggested that they might have to tighten their belts before they reached their destination, but Anne Marie shrugged her shoulders, declaring she had often gone hungry, and that it did not matter so long as one did not die.

The young man could not help admiring her. She was made of a stuff that differed in every way from the material out of which the greater part of the women of civilization were built. Suffering, hunger, cold, hard toil, all these were accepted by her as the natural incidents of life.

She was pleasant and helpful, appearing to have no ambitions and no desires that could not be easily satisfied. She was strong and willing, and seemed to be grateful for the smallest thing that was done for her. Her intelligence was undeveloped along most lines that formerly he had deemed essential, but what a companion she was in the woods Ay, she was a fit mate for a man!

By the fitful light of the little stove he looked at her. She was sleeping peacefully upon her side. Her fine features seemed to him a new and interesting sight. It did not appear to him that he had ever studied them before. She had at first been to him a poor sick thing, like an ailing dog, and he had done for her as much as he would have done for any suffering being.

She had even, as belonging to another race and another world, for a long time hardly appeared to him as a woman, but merely as some thing entitled to kindness. And now he thought of her as a companion and as a mother of men, and through his heart there passed a pang, a desire that things might have been otherwise, that his existence might have been thrown among her people and in her land.

Sleep came to him at length, but he dreamed a great deal, and in his visions saw himself walking hand in hand with Oumemeou, the dove, toward blue and purple hills, and farther white mountains, and along transparent lakes and singing rivers, and through forests whose aspens and birches, whose pines and spruces, murmured sweet things and spread carpets of leaves and needles before them, redolent of the scent of the wilderness.

During the night a rabbit was caught in their snares, and they had it in the morning for breakfast, with plenty of hot tea. It did not make a big meal for two and a dog, but they decided it would have to do, and they enjoyed the luxury of being able to start without making a new raft. The temperature was still lower, and along shore the film of ice was thickening and widening.

They made the seven miles to the next carry in less than three hours, and after portaging all their stuff began another raft. It was no sooner finished, however, than it began to snow so hard that they decided it would not be safe to travel.

They could not see twenty feet before them, and it would not do to run chances of being carried down rapids without being able to guide themselves, or even down the big falls at the *Chute a McLeod*.

At dusk the snow ceased, but it began again in the morning, coming in wild flurries with a high wind. Their raft was sunk deep with the ice that had formed on it. Pierre worked hard to clear it of the snow that covered it, with the blade of a paddle, and to chop the ice off.

They finally started and traveled a couple of miles. By that time there were several inches of snow on their craft, and the poles were so thickly covered with ice that they could hardly handle them. When they sought to make the shore it was so thick that they could not land for some time, until they reached a place where the water was swift near the bank.

"It's no use, Anne Marie, the ice makes so fast that we can't handle the raft any more," he told the girl. "Unless it gets less cold we'll have to travel along the bank, and take the river when we can."

They were so cold that they stopped to make tea, and finally decided to stop for the remainder of the day. The flurries of snow continued to fall, and they had a hard time making camp.

They had landed in a desolate place full of rocks, upon which a scanty number of small trees eked out a precarious living. The raft was anchored by tying it with a rope, and for greater safety two poles were driven in the bottom of the river between the logs.

In the morning it was still there, but it took long to chop it fairly clear of ice. It did not seem very buoyant, and with much trouble he added two more logs to it. A short time after starting they reached a dead water

whose whole surface was so covered with ice about an inch thick that they had to stand up and break it down with their poles to make a channel.

"The cold has come," said Anne Marie, "no more warm days. There will be no more drifting down the river."

When they got through the ice, they floated down another mile or so in swift water, and brought up hard against a sand-bar. They worked a long time to clear it, but unsuccessfully, and had to walk to the shore through seven or eight inches of water, their heavy loads making their feet sink deep in the sand. Nearer land they came to ice, through which they often broke; but, as there were only a few inches of water, they got no wetter than they already were. Pierre had carried the dog, fearing that a prolonged ice-water bath might injure it. He left him on shore with Anne Marie, and returned for the rest of the things. When he got back, there was no more sensation in his feet.

Anne Marie had lighted a fire, and they took off their moccasins and rubbed their feet with snow. Pierre was slightly frost-bitten. He suffered keen pain by the time he put on his spare stockings and shoes.

After having tea and a little of their precious meat, they started to make their way along the shore. The snow was soft and not so deep as to make the walking very troublesome, excepting in little drifts. All their luggage was now contained in two packs. Pierre carried about sixty pounds, and Anne Marie little less. Their progress was twice impeded by streams they had to cross; and, after getting over them, they came to a high bank running parallel with the river, up which they had a hard climb.

"If we could only find a place with lots of game," said Pierre, "we could wait till the river froze hard and walk on it as often as possible. Then we'd make good time."

"No game here," said the girl, "except a few rabbits and partridges."

In the morning it was still very cold. The lakes must all be freezing over, but the swift rivers took longer. One of Pierre's feet hurt him a good deal, but he paid little attention to it. The bad going and the constant changes of direction in order to avoid rocks, windfalls, and deep gullies wore into the soul as the tump-line ground itself into his forehead.

At times it seemed as if they were in a vast prison, from which they sought to escape with ball and chain tied to their feet. Their loads ground them down into the hard surface.

Pierre's muscles now resisted the wear and tear of the labor well, and he only felt sore and tired, as often before; but there was a mental strain, due to the uncertainty of the thing, to the consciousness of insufficient progress, of scanty food, of the thought of the anxiety of the old people at home, who knew not where he was, as he had only said he was going in the Lake St. John country for a trip.

These trains of thought came from time to time, and made things worse. Anne Marie, by common consent, was the pathfinder, and he trod behind her, in a quiet, weary, yet plucky, way. His senses were merely dull with the stupid grind of it all. But he never was the first to call for a rest.

At what seemed to be very regular intervals she would stop and lean her pack upon a fallen tree, or a boulder, without taking the tump-line from her forehead, and, usually in silence, they would wait a while, until the pain seemed to have left their strained muscles.

Yet they knew it would return as soon as they lifted their loads again. During these stops Pierre generally lit his pipe, but sometimes he felt too tired to smoke. He had an immense amount of reserve force and pluck left, but his fairly easy life had never made such demands upon him before. He had never really known what it was to bend his muscles day in and day out to a strenuous task, and to take it up again and again without surcease.

Ou-memeou was not more effective than he, excepting in that her greater knowledge of the woods made her his superior in traveling. But to her the work was not so irksome. It was the life she knew, the only life she had ever known —harder at one time than at another, but such as was necessary, indispensable, and from which none of her people escaped.

From morning till night the hours of toil went on, each interrupted by a couple of short rests. Apparently impassable places would be reached, and they would consult in a few words.

Sometimes they dropped their packs, and explored; but nearly always the girl discovered the best way around the obstruction. This sort of thing gave their heads and backs a rest, yet was unwelcome. It kept them back; it interfered with the grinding toil that, after all, constantly brought them nearer to their destination. They were seldom in sight of the river, as there was hardly ever any fair walking along the shore. But the girl's sense of direction was never at fault.

At first Pierre argued with her at times,

and insisted that she was mistaken; but it always turned out that she was right, and after a while he entrusted the whole matter to her, blindly following her grimly and uncomplainingly, his mind often occupied with trivialities which somehow lessened the toil.

Toward evening, when they began to think of making camp, he reckoned that they had been traveling for nine hours. The actual walking had taken perhaps seven of these, and the rests, including a midday stop for lunch, would account for two.

If they had been going in a straight line, they would have covered about fourteen miles. But he thought of all the turns they had made around obstructions of many kinds, and feared it could not be more than ten.

Just then they came out upon the shore again, and Anne Marie looked intently, seeking to recognize the place.

In a moment she said she knew where they were.

"How far have we gone, Anne Marie?" he inquired.

"About eight miles, reckoning the course of the river," she answered. "We are not far from McLeod's portage."

He knew she must be right, and that the pace had really been very slow, with their big loads and the dreadful country they had traversed. He was too tired to feel more than a slight disappointment. They threw down their packs and made camp.

The three birds were skinned. They were not very fat, and hardly made a meal for two people and a dog. More food had to be added from their store, yet it was a saving for which they felt grateful.

The sky was leaden, and promised more snow, but the fire was cheerful and comforting as they sat close to it, and life did not seem so very dreadful just then.

The hard work and the cold had made them ravenous, and now, with full stomachs, and a hot fire before them, they sat in a semi-torpor that was pleasant. With his old pipe in his mouth, Pierre again looked upon existence as a thing worth being blessed with.

He had followed the girl, who now sat contentedly by him, the whole day long, allowing her to lead, realizing that in the woods she was his superior. Considering her smaller size and weaker muscular power, she was doing the better part of the work.

This interest in her was constantly growing. Yes, he admired her. She was becoming an object of more intense thought to him with every day's journey.

He caught himself staring at her several times, and this apparently made her uneasy, for she kept her eyes cast down, in silence.

During the night there was another heavy snowfall, and when they started again the walking was worse than ever. But they were pleased to see that the river was freezing over more solidly. This could easily be seen in spots where the surface had been swept clean by the wind.

They ventured out upon it cautiously, stepping gingerly through the snow.

"It is pretty strong," said Pierre. "I suppose we ought to pray for colder weather to enable us to travel on the ice. It would not take us long if we could follow the river."

"Two more days of this cold would do," replied the girl.

Once or twice the ice under their feet gave out a sound of cracking, like faint pistol-shots, and they returned to shore.

Resuming their loads, which were becoming sadly lighter, they set out again through the woods.

That morning they had again weeded out the bags, and found a few objects that they could spare, and which they abandoned.

They plunged through heavy drifts, and, at times, in the forest found the ground nearly bare. In the open, the snow was slightly crusted, but they broke through this, and it made awful going.

In the swamps the water was frozen quite solid, and, as they no longer sank in the soft ooze, their progress here was easier. It was again a dreary grind, but for some time they felt better than they had the day before, for it was colder and the sky had cleared.

The snow was dry, and crunched loudly under their feet. Pierre thought that the temperature must be near zero, for the cold nipped their hands and feet, and their breaths went out in white puffs. Paddy sometimes would flounder badly, but was plucky, and worked himself out, and soon found out the wisdom of walking quietly in the tracks made by his master and the girl.

There were so many twists in the river, from which they did not dare to go too far, that they were compelled to make many turns, and it took all day to reach McLeod's portage, but a few miles farther on.

They camped here, in the bitter cold, and went on in the morning, as soon as the light permitted. The portage ran over a high hill. It was hard walking, but the path was plain.

Once below the falls, however, they had to take to the wilderness again.

(To be continued.)

HELP FOR MEN WHO HELP THEMSELVES—NUMBER 34.

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THE SUPERINTENDENT OF MOTIVE POWER.

BY ROBERT H. ROGERS.

IN his previous papers in this series, Mr. Rogers dealt with the more subordinate railroad officials. In this article (the concluding one in his series) he presents a study of the superintendent of motive power. Among the men who rapidly sway the destiny of a transportation system to either success or failure, whose moves foretell whether passenger and freight receipts are to go on climbing, or whether the vampire of careless management and higher operating expenses shall result in the downfall of a once prosperous corporation, the superintendent of motive power is some pumpkins. He is ranked with the master spirits of railroading. The president, the general manager, and the board of directors look to him for new and original ideas and up-to-date methods for increased efficiency of operation.

An Important Position Which Can Be Successfully Filled Only by a Leader of Men Who Is Also a Mechanical Genius and a Master of Details.

THIS is the elevation which, to the tyro, and even those in the business who should know better, savors of terrapin on toast, popping corks, and luxury amid the sumptuous environment of a palatial private car, from whose velvet-upholstered depths the occupant waves through the smoke of a dollar cigar indulgent permission for the sun to go on shining. A somewhat fanciful thought, perhaps, but it embodies, nevertheless, how some misguided persons picture the superintendent of motive-power, or mechanical superintendent, call him what you will.

It has always been an imposing position to the subordinate official, for the reason that a car goes with it. The true appeal of the private car is too subtle for definition, but it is the most impressive spectacle about a railroad, and it is not necessary to remain among railroaders to hear its mention as synonymous with all the good things of life.

They are wrong—all whose thoughts follow such lines of reasoning. These cars are nothing but traveling offices—workshops, in reality, and far removed from anything like real comfort.

The principal passenger would much prefer to use the regular train service of the road while on his rounds, and does so, except on occasions wherein the length and scope of the journey render such procedure prohibitive. Then he takes his car along,

and keeps from dropping a week behind in his office-work.

There is little pomp and circumstance about the position, although this assertion may serve to cast doubt on another cherished illusion. The oft-quoted big head cannot be properly associated with this grade in the service, because the previous schooling has been too leveling. The heartless past has vouchsafed too varied an occupancy of houses built on the sands for the cultivation of ostentation, and one only needs to step aboard any one of these cars, which are to be found pushed into clear around some terminal, in order to make sure.

You will have far less trouble, by the way, in effecting an entrance than if you applied at the superintendent's headquarters in the general office-building, as formality is largely waived, and people are coming and going all the time. Your ear, however, will not be pleasingly greeted by the noise of the aforementioned corks. Instead, it will be assailed by the click and rattle of typewriters, and you are more liable to stumble over a bunch of file-cases than you are over a velvet divan.

Over there, in the corner, is the man you are looking for, and many things about him are apt to belie the conception of your ideals. They totter in presence of the fact that, while running his eye and pencil over a big blueprint spread voluminously over a temporary drawing-board, he is munching a plebeian cheese sandwich, instead of the delicacy mentioned at the beginning of this article.

A Democratic Individual.

More than likely he is attired in an old frayed coat, with the elbows out, and a Scotch cap pulled over his eyes; a parody somewhat of the part you had perhaps expected him to play. Presently he will ring, and the stenographer will jot down a few rapid remarks before taking away the blueprint and attachments, but not the sandwich, however, to which the chief clings lovingly throughout the bustle. He does not part with it for a reason, as it may now be 5 P.M., and it probably represents all he has found time to eat since breakfast.

"There goes the boss out for another junket with his car," is an absurd statement one often hears. If any idea of a junket is or has been entertained, dismiss it now. Champagne corks do not pop in official private cars, nor in the knock-about borrowed temporarily by the roadmasters' committee while deciding which section-foreman is entitled to the annual prize. Nor even in the much more exclusive one which houses the president when on his travels.

The railroad is more worthy than the law of the title of jealous mistress, and it brooks no rival. Officials understand this, and they would not be officials if they had not well digested its truth.

An Office on Wheels.

You will note that the car, during its limited stay at a terminal, transacts a tremendous amount of business. Possibly it has not been side-tracked at this particular point for two or three months, and it becomes at once the center of interest, at least from a motive-power standpoint.

There are always minor officials of more or less importance constantly riding over the road in the interests of that department: inspectors of locomotives, machinery, and cars; indicator experts, and calculators of tonnage rating, all of whom report to the superintendent of motive-power by letter, and only when he is on the line have an opportunity to meet him face to face.

They naturally have an accumulation of business to unload, sufficient to stagger any but a thoroughly trained mind and a brain accustomed to making quick decisions to avoid delaying a costly game.

Along these lines an incident may be recalled to illustrate the general versatility of the men who hold down the strenuous job of head of the motive-power organization. It was on an occasion when the car used by the general mechanical superintendent of the Erie Railroad stopped at Port Jervis, New York, while westward bound on a general inspection.

For two weeks previous to its arrival several experts in their line, had been conducting an elaborate series of locomotive tonnage tests on the new Erie and Jersey extension, and with much complaisance called to make a report.

The results of the test, properly tabulated with grade resistance, curve resistance, rolling resistance, and all associated features of moment, were spread before the chief for approval; but in less than an hour, with a lead-pencil and his own calculations on the back of an envelope, he had literally shot the record full of holes.

He pointed convincingly to an error here, and a graver one there; to the omission of essential detail, and to the unnecessary addition of undue complexity, until the experts

retired very much chagrined, and ran the test over again.

This little by-play proved singularly appealing to the writer, because he knew that the men on the test had but that one assignment to harass them, while the general mechanical superintendent had on his mind at that time no less than one hundred items of widely varying scope.

For him to thoroughly revise their calculations on a moment's notice could not but compel admiration for the sterling qualifications which made such a feat possible.

Grasping the Details.

A. E. Mitchell, now retiring from railroad work, when superintendent of motive-power on the Lehigh Valley, was equally resourceful, especially when anything like a showdown was in order. He was probably more proficient in the ready employment of formulas to score his point than any man the business ever knew. He once had some engines of a certain class which were claimed by their runners to be slippery, in a condition where nobody could hold them down, and were quoted as "slipping out of a sandhouse," until the division where they run became much agitated.

The master mechanic in that territory advanced the theory that the steam pressure should be cut down to lessen the tractive effort, and came to the car, on the occasion of one of its visits, with his road foreman of engines, to present this contention.

It didn't take Mitchell long, however, after asking a few pertinent questions, to effectually dissipate this hypothesis. He proved to their satisfaction, through a few simple figures, that the steam pressure did not need to be changed, as the tractive effort was at present less than the adhesion on any one pair of driving-wheels, and, consequently, the engine could not slip from overpressure.

This demonstration was in turn conveyed by the road foreman to the engineers, and presently everybody forgot all about the slippery motive-power.

Receiving Reports.

The road foreman of engines is always a visitor to the car when it is in his territory, and the superintendent of motive-power is glad to see him. He is essentially the best-posted man on the division regarding locomotive performance, as he is charged with riding on the engines all the time, and is fully competent to discuss the all-important matters of fuel and oil consumption.

It might be added that he will be sharply criticized if he fails to make at least an average good showing in these two items, the criticism being based upon the tabulated statement prepared monthly which portrays the economics of the entire system.

The master mechanic must necessarily pay his respects; recognition of authority demands this, if nothing else; but even if he should not call, any idea that the superintendent of motive-power will fail to take advantage of the opportunity to visit him had best be abandoned, because this is really the purpose for which the car was side-tracked at the division terminal.

The master mechanic had better improve the hour or so of friendly notice which he may have had from the train-despatcher that the car was coming to get his shops and engines in apple-pie order, as they will be in for a relentless scrutiny from one who knows where to look for trouble.

Finding the Flaws.

Notwithstanding the reports which pass without intermission, daily, weekly, and monthly, from the office of the master mechanic to that of the superintendent of motive-power, and in which the details embodied might be assumed to fully portray the conduct of the division, there is still much which they do not picture.

They omit mention of broken window-panes, roundhouse pits flooded with water, machines standing idle, material misapplied, jacks in serried ranks, out of business for lack of a little tinkering, and many, many other features incompatible with things as they ought to be; hence the necessity for an analysis of the local situation from a personal view-point.

At times a thin-skinned master mechanic will become aggrieved at the criticism leveled at his plant and its *modus operandi* while accompanying the superintendent of motive-power on one of these inspections, and very often it does seem somewhat unkind and ill-advised.

The master mechanic may not take a sufficiently broad view of the matter to appreciate that these things are only skin-deep after all, and that his superior can have no other logical motive than to help him out.

It must stand to reason that when an official clothed with so much authority makes a

lengthy visit to a large general shop, and departs without finding any fault, he either intends to make a change in its head, has no interest in the head's success, or doesn't know enough about the business himself to criticize.

As the latter is an extremely unlikely contingency, the master mechanic should really feel better that he is thus criticized, because he can depend upon it that when a superintendent is finding a little fault he is simply picking specks off a good apple; and if he thought the apple was spoiled he wouldn't take the trouble to bother with it.

Where Seeing Means Saving.

Probably the most painstaking inspection trips ever made were those of F. N. Hibbits, formerly mechanical superintendent of the New York, New Haven and Hartford Railroad. That he was a master of detail may partially explain the diligent effort which he always made to delve to the bottom of every department represented, from office to turntable.

Amazing as the statement may appear, he could glance into a single bin in a large storehouse and say positively whether or not it contained more stuff than on the occasion of his last visit, maybe six weeks before. With this remarkable memory was associated an equally remarkable acuteness, as many will attest who ever tried to hide anything from him on short notice.

Whether or not some of his rulings delivered on the ground were exasperating from a strictly local view-point, we were still always glad to see him come around the place.

We knew that he was honest in his motives and convictions, inspired only by a sincere enthusiasm for the general good of his department. He attacked the problem of motive-power administration with much effectiveness by maintaining an unceasing vigil over leakages, whether represented on the pay-roll or the stock account.

The results were always substantial, as under his régime a single division of the road cut down its pay-roll $20,000 in one year, and reduced its stock balance from $55,000 to $30,000 in the same period, the service remaining unimpaired through the retrenchments.

Hibbits realized that good stock, not to mention obsolete stock, represented money tied up without interest, and in curtailing this to a working basis was simply anticipating what is a requisite now on the Harriman lines for every man in a supervising capacity who wants to hold his job.

Still, other matters vital to the general efficiency of the division, if not to the system as a whole, remain to be considered before the superintendent's car can be attached to the train for further movement. One of these, a personal duty, is to quietly sound the labor situation; to know that the master mechanic and his foremen in that territory are living up to the letter of the agreements between the various trades and the company.

It is an unwritten duty of a mechanical superintendent to keep the peace, not only between the organizations and the company, but between the foremen themselves and the master mechanic. Lack of harmony has shattered many a perfect organization, and the superintendent of motive-power must restore it at the expense of a house-cleaning, even at the expense of men whom he may have made. With a full realization of all this, the superintendent cannot leave one division for the next with his mind at ease until assured that not the suspicion of a cloud rests on the horizon.

So much for the visit to a single point on the system. Multiply this by ten remaining divisions, add innumerable letters dictated and weighty conferences while the car is in transit, divide by eight, as the days covered by the inspection, and you will agree that each day has its full quota of business.

Monthly Routine.

When the monthly trip is over the mechanical superintendent takes up the remaining three weeks of good hard work in his more or less imposing office at headquarters. He always endeavors to be at home the greater part of the month, as this permits opportunity for frequent conference with his superior, the general manager, as well as those of his immediate staff, the master car-builder, mechanical engineer, and engineer of tests.

In some places the office apportionment permits these important officials to be under the same roof with their chief, although he is just as frequently far removed, and business intercourse necessarily carried on through correspondence.

In order that he may be fully advised how his subordinates, the master mechanics, are conducting their various divisions, the majority of railroads employ a system of reporting by forms. There is a daily telegraphic report for the engines held in any one roundhouse every twenty-four hours,

thus illustrating at a glance the amount of available power on that division. There is also a similar report by wire of engine failures, enumerating every instance during the same period where a train has failed to make its schedule time arising from improper condition of the power, and still another message report from each division stating whether or not the monthly appropriation for a single day has been exceeded.

Telegraphic Reports.

These various reports are compiled by the clerks on a large sheet for ready reference, which represents the entire system. The items are to the left, with parallel vertical columns representing the divisions, thus affording the chief a graphic picture of these important details in the day just past.

It depends on his personal caliber just what action will be taken. Should he notice that the A division, with a daily appropriation of $300, has reported an expenditure of $375, he will likely wire the master mechanic sharply to the effect that if he keeps this up he cannot possibly remain within the monthly allotment for his territory.

If on the B division five engine failures loom on the sheet where heretofore one has been the daily average, the chief thereof may be reminded that the bottom appears to be dropping out, and asked to kindly advise what particular phase of the local situation cannot be controlled.

This daily summary of telegraphic reports is the real pulse of the motive-power performance, and every item thereon implying a retrogression from some standard scale of efficiency brings a reminder to the man in charge; and for the moral effect, if nothing else, it must go forth that day. Thus, action is different than in the case of the many monthly reports, as these imply broad results, and may be more leisurely digested.

Engine Economies.

In connection with these latter statements, that indicating the consumption of oil per division is considered of special importance. Most locomotives are expected to run one thousand miles at a total cost of $2.25 for all lubricant and illuminating oils, including valve, or cylinder, engine oil, and headlight oil.

In fact, there are oil-producing companies who guarantee to lubricate an engine for that very amount. It is, therefore, necessary to draw up an oil schedule covering each run on every division, and to apportion the allowance per engine, generally on the basis of one pint of valve and three pints of engine oil per hundred miles, so that the total will not be exceeded.

It might be that the A division, during July, August, and September, lubricated for $2.30, and in October jumped to $2.70. This is a direct increase of forty cents per thousand miles, shown on the report mentioned, and inquiry is in order to learn the cause.

The deadly comparative basis prevails in connection with the oil performance report, as, indeed, in the instance of all the others; and there can be no evasion in the explanation.

There may, of course, be a legitimate reason for the rise in cost; new engines breaking in and requiring extra oil, extra long hours on the road, and many others which would be valid; but, whether valid reasons or simply excuses, the explanation must be forthcoming. The idea is to prevent lapse into carelessness.

Through all the monthly reports the same idea predominates. The embarrassing duty of having to explain a worse performance than some one else serves to keep the master mechanic on the job all the time.

Filling New Wants.

There is another report showing the number of overhauled engines turned out of the various back shops for the month, but particularly the cost of the repairs which they received. If the cost is higher on the A division than that shown by the B, C, and D divisions for similar work, something is wrong—at all events, a condition is present on the former division requiring correction.

It is through these and other statements that the superintendent of motive-power may absorb fairly accurate information regarding the efficiency of the various divisions under his jurisdiction, and, after a year or so, can say conclusively which master mechanic is delivering the goods, or *vice versa*.

They exemplify the wonderful system prevailing in railroad organization, in which, no matter how much familiarity may be attained, there is always something new and something to admire every day.

The matter of forms may seem overdone at times, even absurdly so, but the idea is that only results count; results compared with those achieved somewhere else under equal conditions.

Independent of his routine work, which heretofore has been commented on, the superintendent of motive-power must be an originator. He is paid $10,000 a year, not for scanning a multiplicity of forms and making trips over the road, unpleasant as the latter may be, but for thinking all the time how to improve his department, and particularly to reduce general costs through labor-saving operations in the shops.

If he cannot show increased efficiency and reduced expenses over the administration of his predecessor he is labeled a failure, and the general manager will be likely to very shortly let him know it.

In view of all the duties mentioned in this article which pertain to the position, it might be thought that little time would be left for original research; but some superintendents have managed to find it.

F. W. Johnstone made a sterling record on the old Mexican Central in the face of two handicaps — no money to spend, and any amount of interference.

While organizing his department on a common-sense basis he still found time to develop for railroad service the native labor of Mexico, so that dependence would not have to be placed on the elusive floating element from other countries. He worked out and patented a blow-off cock of his own far superior to anything else in use in that bad water country, and a compound engine of his design was the only thing which would handle a train over Rascon Mountain in those days.

Men Who Succeeded.

A. J. Cromwell, of the Baltimore and Ohio, was the successor of the truly great men, Ross Winans, Thatcher Perkins, and John C. Davis, whose genius left its reflection in every car and engine which the B. and O. owned when he became elevated to the position; yet he designed and built, in the Mt. Clare shops, the most efficient power for its inches ever operated by that or any other railroad.

If you ask them there to-day, they will tell you what they think of the Cromwell eight-hundreds in their time, and may point to some of them running yet.

H. D. Taylor, of the Reading Railway, designed and built, last year, in this age of competition, a three-cylinder locomotive of entirely new design which is giving wonderful results at present in service on the New York division of that road, and he planned and brought into being the great Reading shops, which, in perfection of detail, are probably the best appointed in the country.

T. Rumney assumed charge of motive-power affairs on the Erie when, to say the least, they were in a bewildering condition. The management of that department had changed so often that fifty sets of ideas were exemplified in the design of merely minor locomotive parts, and a dozen methods of doing the same job could be observed in a trip over the road.

The contrast afforded after three or four years well-directed effort is startling. Sound and economical ideas now prevail in every shop from Jersey City to Chicago; sensible labor-saving devices have been introduced and circulated over the system by special men for the benefit of all master mechanics. A single casting serves where formerly a dozen had to be carried in stock; standard shop practise-cards are in vogue and rigidly adhered to; and the general efficiency of the power, based merely on comparison of the engine failure reports during the period, has increased over one hundred per cent.

The Advantage of Prosperity.

The ease with which the work is done, broadly speaking, depends largely upon the prosperity of the railroad and on whether the general motive-power appropriation is sufficient for the adequate maintenance of the shops and rolling-stock, to provide personal help for special investigations, and to develop new ideas.

The Pennsylvania System represents this enviable condition. It is characterized by a broad, liberal policy on the part of the management, which finds its reflection in the amount of money allowed each department.

In consequence, its mechanical department has always been identified with originality and research. Under the direction of its chief of motive-power, $200,000 has been expended in one year for research work alone for the possible betterment of existing appliances.

On a prosperous railroad the superintendent of motive-power will have on his personal staff, a master car-builder, at $4,000 to $5,000 a year, charged with the administration of the car repair department; a mechanical engineer, at $2,500 to $3,500, under whom is the drawing-room; and an engineer of tests, at $1,800 to $2,500, to test and analyze all crude material purchased for the mechanical department, and to whom the various inspectors make their reports.

This is the usual organization; but if the road is richly endowed, the mechanical superintendent can still surround himself, through the mechanical engineer's office, with technical men, which training he may not have had opportunity to acquire, provided he came up in the usual manner traced in this series of articles as the evolution of the apprentice. Then, if an inspiration should come to him regarding a new type of engine or car to meet the growing requirements of his road, a rough sketch and pencil-notes will suffice as the groundwork from which they will work out the details.

He may even be so fortunate in the way of money to spend as to have attached to his office a thoroughly practical and shrewd mechanic, possibly an ex-foreman or master mechanic of varied experience, and he can use this man to much advantage. Sometimes frames commence to break mysteriously under engines, or an epidemic of hot boxes may crop up on some division, which means an assignment for this practical assistant.

They might break and run hot for six months before the facts were arrived at through the medium of correspondence, but he will repair to the scene and investigate the conditions without fear or favor, and in many cases nip the trouble in the bud.

This position, known as general inspector, is fast becoming recognized as an indispensable adjunct to the superintendent.

The poor railroad cannot do these things; in fact, to make both ends meet, it must restrict the general supervision in the motive-power department to the master car-builder and the mechanical superintendent. Some of them even cannot offer a mechanical engineer, to say the least of a test department, and the work under such conditions is harassing in the extreme.

Whether with money to spend or without it, the duties of the position are exacting; but what has been said of the subordinate grades in their turn, there is no position connected with the motive-power department not synonymous with hard work and unceasing vigilance.

They have few emoluments to serve as a counterbalance to the grief of possession; but it is, nevertheless, great for a superintendent of motive-power to feel in his heart that he has risen to the height of things, and to many temperaments this is an adequate reward.

It is not the appeal of the dollar, although its coming has been long delayed, but the feeling which prompts a man to view with a swelling heart the fact that he is master of a thousand locomotives, fifty shops, and twenty thousand men; the custodian of a trust wherein the slightest deviation from the rigidly defined way might result in chaos.

It is great to know that those who have been so honored with the appointment must feel the unswerving confidence which will permit the trust; and there are few of these men who, for any consideration, would part with the elation which the position cannot fail to inspire.

A PLEA FOR THE PILOT.

THE pilot, known in the vernacular as the "cow-catcher," which ornaments the front end of American railroad locomotives, has always been a subject for ridicule by foreign railway men. Perhaps it has been partially responsible for keeping alive the tradition that the United States is still a jungle filled with wild animals and Indians.

That the pilot is a valuable safety attachment to a locomotive even on the highest class American railways, where cows, pigs, and other stray live stock are not permitted to promenade, will be agreed to by all American railway officers.

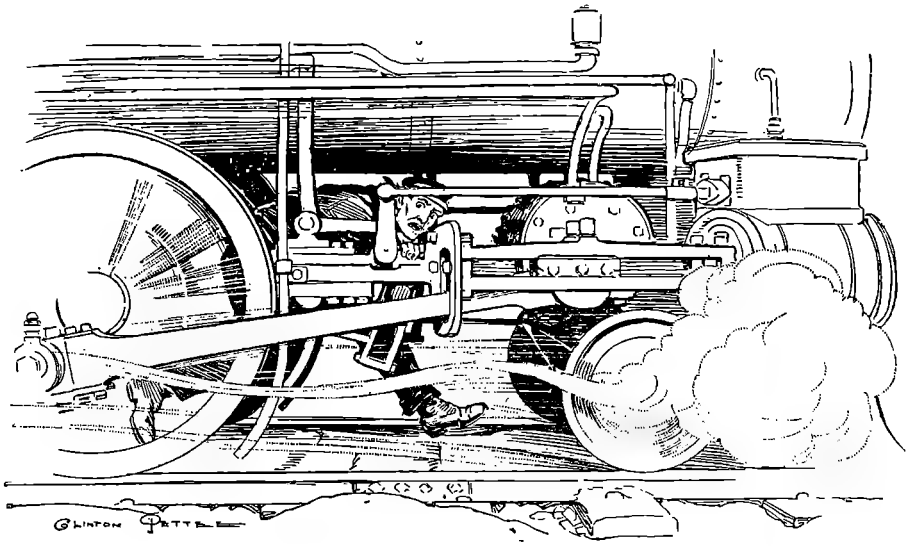
In fact, from two recent news items in the German technical press, we judge that European builders of locomotives for export might copy American railway practice in the matter of pilots with advantages to their customers.

The first of these items records two recent collisions of trains with "wild elephants" on the Siam Railway, near Bangkok. In both cases, it seems, the elephants were killed, although one of the animals was "large" (size of the other not stated). But the "large" elephant was ponderous enough to derail the train (although it was double-headed and had twenty-seven cars), tipping over both locomotives and telescoping six cars.

These locomotives surely ought to be protected by "cowcatchers" designed for an elephantine rolling load; as fences and cattle-guards cannot keep elephants off the line.

The other item is the news that some heavy locomotives which a German firm is building for the Damascus-Mecca Railway are to be provided with "cowcatchers." Not large ones, but sufficient to butt a stubborn camel calf off the track.

So it seems that in this case the wild-animal conditions have been duly taken care of. If Siam will now make the necessary addition to its engines, so that America, Siam, and the Arabian desert will class together, we may regard the cowcatcher to be fairly standardized for all railways which traverse a "howling wilderness."—*Engineering News*.



UNDER THE ENGINE.

BY F. H. RICHARDSON.

Bill Didn't Go to the Beanery as Usual, and Something Out of the Ordinary Happened.

"WHAT is this I hear about old Jack Lawton's fireman getting caught under the engine and nearly killed, Bill?" inquired the eagle eye as he put the finishing touches to a new-fangled spring seat-box cushion he had purchased. He was fastening it into place as the engine stood in the roundhouse. "I heard it was a pretty close call."

"Close call? You bet your steam-gage it was! It was so close you couldn't have shoved a piece of tissue paper between Dick Sommers an' his little six feet of earth to have saved your soul!

"It was so close that the old feller with the scythe shook hands with him half a dozen times in ten minutes."

"How did it happen, Bill?" asked the eagle eye, as he seated himself comfortably on the new cushion and cocked his feet up on the throttle-lever.

"Well, of course, I wasn't there myself, but I heard all about it from the head brakeman, Old Lawton, and Dick, his fireman.

"It was this way: When they pulled onto Hillsdale, Lawton was mad enough to bite a chunk out of the boiled-head. Dick was nursing a big, fat grouch himself, and the head brakeman had deserted the ship entirely.

"He was riding back in an empty box car, cussin' everything in sight, and putting in most of his time chasing himself from one end of the car to the other to keep from freezing to death.

"They'd had an awful time of it all that day. There had been cars to set out and others to pick up at every tank, and you know how them cranky station-agents is, wanting every car set exactly at the cattle-chute or the freight-house door.

"Why, when I was firing for old Bill Hawkens, one of them trouble hunters actually made us uncouple from the train after we was all through, and go back into the siding to move a box car just six inches.

"Gee! how I did love that man! I could 'a' sawed his head off.

"Well, as I was saying, they was having troubles of their own. The coal was about half snow and, of course, the old tub Lawton runs wasn't steaming any too well."

"They certainly were having a merry time of it," remarked the eagle eye.

"Yes? Cheer up, sonny! The worst is just coming in sight around the curve! The left-hand injector had gone on a strike early in the game, and about an hour before we got to Hillsdale, the other one got something wrong with its chronometer balance and cylinder escapement.

"It performed its duty of pumping water into the boiler all right, but it made a noise like an able-bodied buzz-saw. Of course, the prospect of having to set beside the thing all the rest of the trip made old Lawton feel real happy and good-natured.

"He told me he felt so peaceful and contented when he pulled into Hillsdale that he would have actually enjoyed running the engine and train off the end of a bridge.

"The head brakeman had gone back to hibernate in a box car. He said it was two and a half degrees colder there than at the north pole, but he preferred freezing to having his hearing put eternally and everlastingly on the fritz by a cussed brass squirt gone crazy.

"There is a beanery at Hillsdale, and Dick had been in the habit of polishing his teeth on some of the viands, while Lawton was oiling round. Sometimes it would happen he would get hold of an extra tough piece of pie, and couldn't get it broke up into pieces small enough to go down his neck before the train pulled out. When that happened he would jump a car back in the train and walk ahead to the engine over the top.

"As soon as they stopped at Hillsdale that day, Dick climbed down, intending to go over and have a free-for-all with a ham sandwich, but he took a squint into the ash-pan first, and found it chock-full. Of course, that meant clean it then and there.

"He got the ash-hoe from the hooks at the side of the tank and crawled under her to do the job.

"HE GOT THE ASH-HOE FROM THE HOOKS AT THE SIDE OF THE TANK.'

"The engine he fires is one of them old eight-wheelers that ain't got no trap-door in the bottom of their pans, so he had to crawl clear under her on his knees.

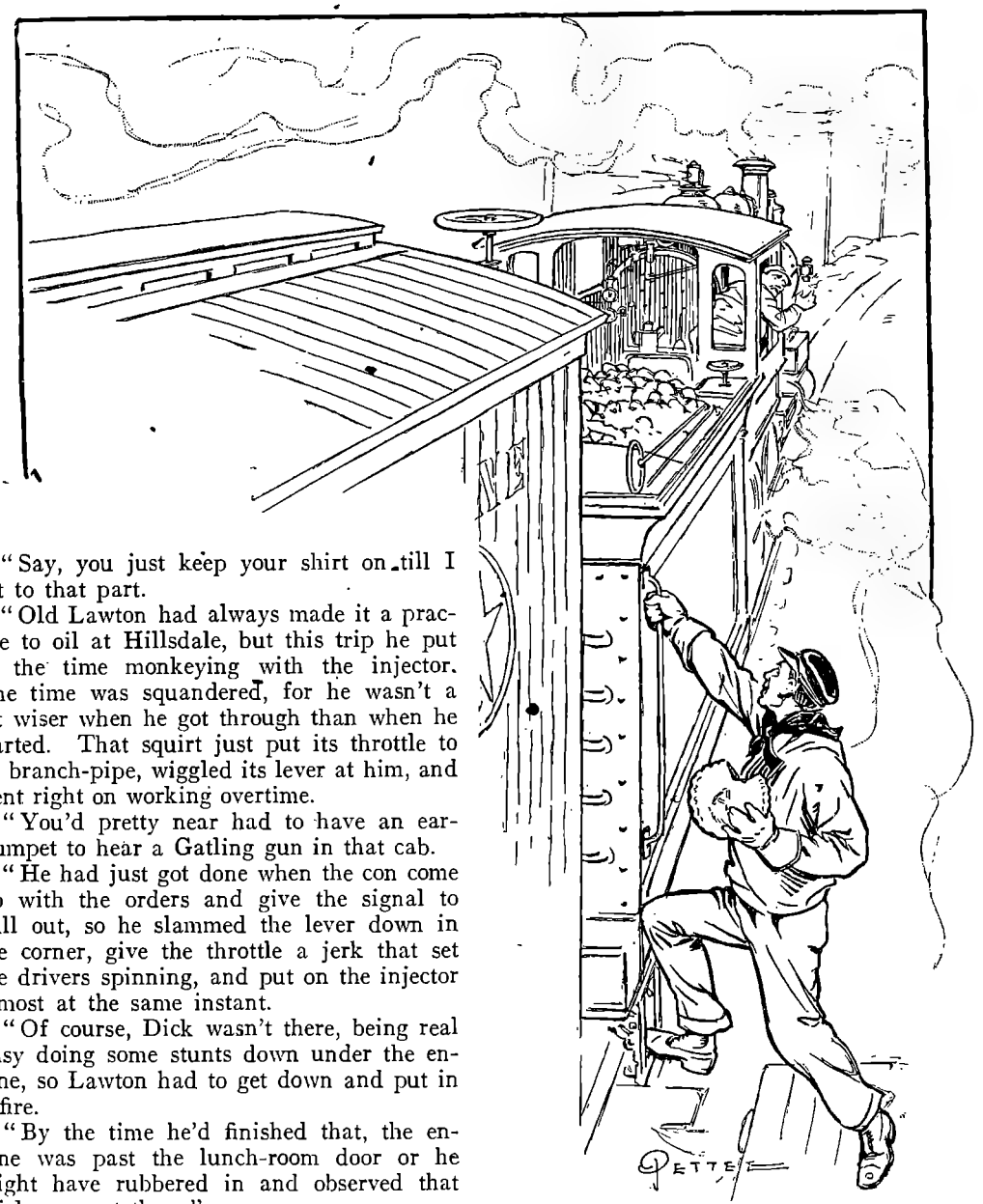
"Some snow had blowed into the pan, partly melted and froze again, so that Dick had troubles of his own getting the ashes out.

"He bumped an elbow on one of the links and, of course, that helped to improve his temper wonderfully.

"But for all his trouble, he got the job done finally, and was just about to pull out the hoe when the engine moved ahead with a jerk and the drivers spun around, throwing a shower of sparks over him.

"You can bet your next month's pay against a cracked water-glass that Dick set up and took notice real sudden!"

"How did Lawton come to move the engine with the fireman under her?" asked the engineer.



"DICK HAD BEEN IN THE HABIT OF POLISHING HIS TEETH ON SOME OF THE VIANDS."

"Say, you just keep your shirt on till I get to that part.

"Old Lawton had always made it a practise to oil at Hillsdale, but this trip he put in the time monkeying with the injector. The time was squandered, for he wasn't a bit wiser when he got through than when he started. That squirt just put its throttle to its branch-pipe, wiggled its lever at him, and went right on working overtime.

"You'd pretty near had to have an ear-trumpet to hear a Gatling gun in that cab.

"He had just got done when the con come up with the orders and give the signal to pull out, so he slammed the lever down in the corner, give the throttle a jerk that set the drivers spinning, and put on the injector almost at the same instant.

"Of course, Dick wasn't there, being real busy doing some stunts down under the engine, so Lawton had to get down and put in a fire.

"By the time he'd finished that, the engine was past the lunch-room door or he might have rubbered in and observed that Dick was not there."

"You don't mean to say that he pulled out—left the station—with the fireman under the engine!"

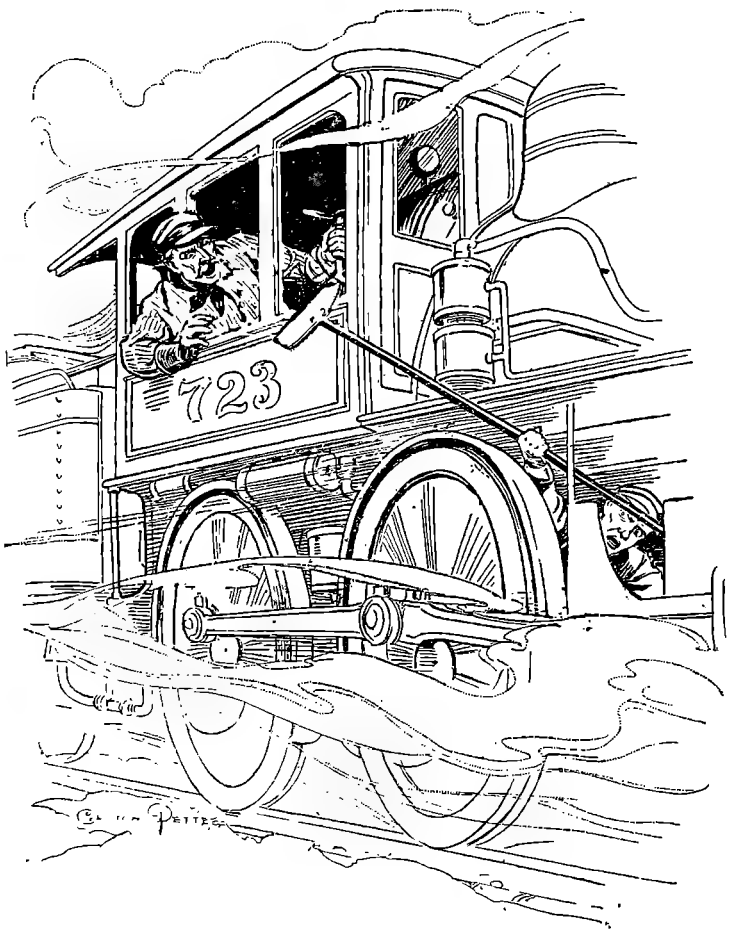
"Oh, no," replied Bill, with fine sarcasm. "Of course not! Dick was on top of the smoke-stack wiping the dust off the smoke!

"Well, Dick was doing some mighty interesting stunts down under that old mill about that time. When she first started, he supposed Lawton was moving her ahead a little to get at her wedges and driving-boxes to oil 'em, but when she quit slipping and the old man in the cab gave her steam again, Dick changed his mind.

"He thought that some one that didn't belong there had got into the cab and had started her by accident. But giving her steam again when she stopped slipping, didn't gibe with that theory. His next guess was that Lawton had gone batty—clean off his base. That injector was sure enough to drive any one to the dippy hut, thinks he.

"Meanwhile, he was letting out yells that would 'a' done credit to an Indian on the war-path; but that was a waste of good atmosphere, for, with that injector going, the battle of Bunker Hill could 'a' been pulled off under the engine without being heard in the cab.

"About the time she got going as fast as Dick could walk stooped over as he was, it popped into his head that he had not told Lawton he was going to clean the pan, and



"IT CERTAINLY WAS AN ASH-HOE."

what was more, there hadn't been any oiling round done—so the engineer had not seen him under the engine!

"'Suffering cattle-guards!' thinks Dick to himself, 'the old man don't know a thing about me being down here, and I'll bet a chunk of coal against a wad of molasses he's pulling out!'

"Up in the cab, Lawton finished putting in a fire and rubbered back at the train, but there was no Dick in sight.

"He climbed up on the seat-box and leaned out of the cab window to get away from some of the uproar the injector was manufacturing. The engine was beginning to move along right spry, and her exhaust was making some noise itself, for she was wide open and Lawton was too mad to hook her up much.

"For all the racket, it sorter seemed like he heard a shout, or rather scream, coming from—he couldn't tell where.

"There wasn't a soul in sight, so he set it down to imagination and, after squinting around, got down to put in another fire, wondering where in Sam Hill Dick could be.

"The fire in, he climbed up on the tank and took a squint back over the train — nary a fireman was in sight. 'Dick's got left' was the first thing that popped into his mind.

"'Now, I suppose I'll have to fire this infernal tub all the way in,' and he growled, looking at Dick's empty seat-box like he'd enjoy kicking the thing out of the window.

"While all this was coming off up in the cab, Dick was stumbling along in the snow, spending his time between trying to keep on his feet, and cussing.

"He stopped yelling. He knew it was no use trying to compete with the injector when it came to making a noise.

"As soon as he was sure they were really leaving the station, he knew that running wouldn't do. He was just ahead of the front driving axle, with the eccentric blades bobbing up and down on both sides and the links just in front.

"Everything around him was moving more or less fast and would soon be moving faster. Ahead, the saddle came down so low that he didn't try to dodge under it to reach the front truck, where he could have managed to ride fairly well.

"The engine kept traveling faster and faster until one of Dick's feet slipped on a snow-covered tie and down he went, expecting to be—well, you know what he'd look like after the engine and twenty or thirty cars got through with him.

"As he fell he made a grab at things in general, and nothing in particular, and one of his hands closed on an electric-blade.

"The thing was heaving up and down, of course, and likewise, it was cold, but Dick hung on like grim death. To let go meant grim death for him, and well he knew it.

"He was dragging right under the driving axle and, reaching up, he got his other arm over it from behind. It was smooth and greasy, and, as the motion was pulling his arm to it, it served as a support almost as well as if it had been standing still, instead of revolving.

"Next, he let go of the blade and grabbed the top edge of a driving-box. He says he don't just know what he did do then, but the next he remembers he was standing on top of the front damper, his back pressed against the jacket of the boiler and his hands resting on the frame on each side."

"But, Bill, there is not enough room for a man to get in between the driving axle and the fire-box, as you describe!" remarked the engineer.

"Huh! You just go look at that engine! She's one of the old tubs with a short fire-box and there's plenty of room. It's wonderful what some of you 'high brows' know.

"The snow was beginning to be drawn up by suction, and it beat in his face till he was almost blinded. The raw iron and snow was making his hands numb, too, and just to help things along and make it nice and homelike, the damper teetered up and down like it would give way any second and dump him off on the ties that was slipping under him like a streak.

"Below, he could see the handle of the ash-hoe sticking out of the pan. On both sides, just over the drivers, was a small opening, and Dick figured that if he could only draw the hoe from the pan he might be able to shove it out on the engineer's side, where Lawton would be certain to see it and be moved to investigate.

"He rubbered at the hoe as well as he could for the snow, wondering if he could reach it.

"'Well,' thinks he, 'if I fall it'll be a case of private funeral and no flowers; but it'll be the same thing a few minutes later anyhow, for I sure can't roost up here much longer, so here goes!'

"Up in the cab, Lawton was dividing his time between running the engine, firing, and cussing the injector.

"That fixed him up so that he felt right chipper, and he climbed up on the seat-box and stuck his head out of the window, only to jerk it in again as though it was fastened to a rubber band.

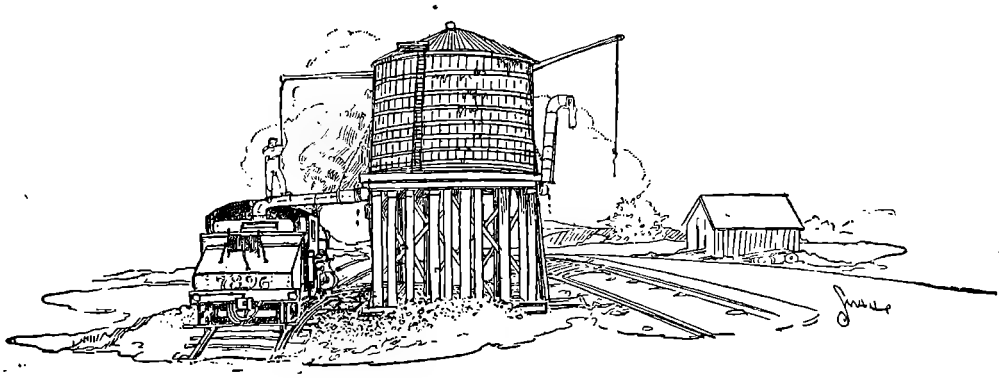
"There, sticking out over the drivers and waving around in the air, was an ash-hoe.

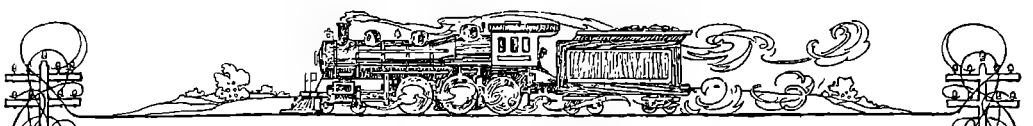
"There was no doubt about it. It certainly was an ash-hoe.

"'What the ——!' he yelled! 'Great horned toad—the fireman!'

"Once he caught the idea, Lawton wasn't long getting a move on him. He swung the air to emergency, and climbed out of the front window onto the running board. Kneeling down and leaning out he could look under the engine, and pretty soon he made out Dick's form through the haze of snow. He yelled to Dick to hold on for just a minute longer, and climbed back into the cab and whistled the flagman back.

"The brake-shoes hadn't hardly got done squealing before he was down on the ground. Just as she came to a stop, Dick tumbled to the ties in a heap unhurt—but happy."





THE GORGE.

BY FLORENCE JOHNS.

Written for "The Railroad Man's Magazine.

OH, narrower grows the pass—
The air is damp and chill;
Oh, whence comes that surging mass
That causes the stream to fill?

But, hark to the sound that I hear!
The thundering sound that is pealed!
It comes from afar and yet near,
For soon is the wonder revealed.

And narrower grows the path!
More noisy the waters sweep!
With fury and foaming wrath,
They make their desperate leap!

'Tis naught but a slender ledge,
That borders the rushing tide,
And the road seems just like a pledge,
To stay by the river's side.

The narrowing road leads straight,
And the waters keep up their chant,
Ever louder the dashing freight
Continues to mumble and pant.

Till the path and stream form a wedge
'Twixt walls of gigantic size,
And plunging within this hedge,
The waters continue their cries.

And the plunging, crashing freight,
Vistaed between the rocks,
Seems like an added weight
To the guarding sentinel locks.

And the waters continue their play.
Are they seeking their liberty?
Or, is the freedom a fray,
As they're forced to the far-off sea?

And down they splash and they dash,
They churn and they foam and spray,
They drop like a gleaming flash,
And, unfettered, pursue their way.

To Transit Improvements in the City of New York—$6,000,000,000.

BY E. L. BACON.

EFFICIENT transportation facilities for New York City, whose subways and street railroads last year alone carried as many passengers as there are people in the world, have long been the despair of railroad presidents and boards of directors of the lines which terminate in Manhattan. Even when engineers came forward to solve the difficulty, the enormous expense entailed made them hold back until the pressure of rapidly increasing traffic left no other course open. Now that the purse-strings have finally been loosened, there seems to be no limit to the golden flood that is pouring forth.

Bigger and better is the watchword, and of the billions of dollars to be spent for transit improvements a large part has already been consumed. It is a sum of money almost too great for the comprehension of the average human being, and yet the rate at which present traffic conditions are growing points to the fact that it will probably have to be duplicated within a generation.

The Gigantic Sums that Will Be Paid Out in the Near Future by the Municipality of the American Metropolis for Street-Railway Improvements Almost Dazzle Comprehension.

A STRANGE, cosmopolitan army of workers, such as had never been brought together before, began to scatter to the four corners of the earth when the Pennsylvania's tunnels connecting New Jersey, Manhattan, and Long Island were completed.

Up from the wonderful subterranean highways of commerce they had built, blinking in the unaccustomed light of day, came Austrians who had got their training in the construction of the great Simplon Tunnel through the Alps, hundreds of negroes, Poles, Germans, Russians, Englishmen, Americans.

Among them were engineers and foremen who had built tunnels in Egypt, in South Africa, in the Andes—men who had wrestled successfully with great problems of construction in Nature's mightiest fastnesses in many a remote region, whose conquests had set the world to marveling over the wonders of modern enterprise and ingenuity.

"Now that the job is finished what do you expect to do next?" inquired George Carey, one of the older engineers, of Bill Ferguson, a younger member of his profession who had been working with him in the tubes for eight strenuous years.

"Get a harder one," replied Ferguson.

Carey rubbed his grizzled beard for a moment and smiled sadly. He was a man who had been through many a big feat of engineering.

"Young man," he said, "you won't find any harder job than this in your generation. The biggest thing has been done. All this work that is going on now of rebuilding New York as a traffic center beats anything the world has ever dreamed of and anything of the kind that will be seen in my lifetime or in yours.

"These are the times that you will look

back to and will talk about when you are old. You've got a breathing space now to stop and realize how much in our line is going on in this city, and when you've done so you'll agree with me."

Any one else who stops to realize the same thing will agree probably that the old engineer was right. Other great terminal improvements will be planned and built, but it is hard to believe that this generation of workers will again be engaged in such a colossal scheme of traffic construction as is to be completed within the next five years—the rehabilitation of New York's transit service, the first and greatest chapter of which, the extension of the Pennsylvania's roads into Manhattan Island, is now drawing to a close.

Where the Money Goes.

Big figures are not as impressive in these days as formerly. When one is confronted by them on every hand, they lose their significance. The public's sense of proportion becomes warped. Instead of showing immediate astonishment, one has to stop to consider whether the expenditure of a few millions means very much after all in comparison with other big things that are being done.

But we haven't begun to talk about billions yet, there being no billionaires, no billion-dollar buildings, no billion-dollar construction works of any kind, and the spending of even half a billion is enough to make the world open its eyes and take notice.

That is what the remaking of New York as a traffic center is going to cost—a half billion dollars! Perhaps it will even cost another hundred millions. This is the price of solving the knottiest traffic problem that has ever been presented, or probably that ever will be, within the lifetime of any one that lives to-day.

It is the penalty of having established the metropolis of the Western world upon a long and narrow little island banded by broad and deep rivers.

Just a few figures. They will give a more detailed idea of what a huge piece of work this rehabilitation of the New York traffic center is:

Bringing the Pennsylvania Railroad into Manhattan Island and linking it with Long Island and New England, $159,000,000.

Reconstructing the New York Central Railroad's terminal on Manhattan Island, $70,000,000.

City subways now being constructed or already decided upon by the Public Service Commission, $130,000,000.

Piers which the present city administration expects to build, $42,000,000.

These figures make a total of $501,000,000.

They do not tell the whole story. Another item is the extension of the Hudson and Manhattan Railroad Company's tunnel, the additional line to run from Thirty-Third Street and Sixth Avenue under Sixth Avenue to Fortieth Street, and under Bryant Park to Forty-Second Street and the Grand Central Station.

But there is still another huge improvement yet to be mentioned—the building of a harbor in Jamaica Bay and the cutting of a canal connection from there to Flushing Bay. If this project should be carried out it would bring the total much nearer to $600,000,000 than to half a billion.

Just how much it would cost, nobody knows. The estimates run as high as $70,000,000. Perhaps the project will never be carried out, but the city has already agreed to spend $1,000,000 for preliminary work in case the national government appropriates $250,000 for the same purpose.

A President's Problem.

There is a pathetic chapter in the story of the remaking of America's greatest terminal point. A commanding figure in the railroad world a few years ago—perhaps the most commanding at that time—was A. J. Cassatt, president of the Pennsylvania Railroad. He was a commanding figure physically as well as by reason of his ability—a giant of a man more than six feet two inches in height, broad of shoulder, straight as a soldier.

It was in the brain of this man, who saw farther into the future than most, that the first great step in the work now under way of making the world's most marvelous traffic terminal was conceived. It was his bold plan that stirred his road's great rival, the New York Central, into mapping out its own huge terminal improvement.

The Solution.

He found the way. Quickly there began to develop the whole tremendous plan. To the directors of this company he presented, in confirmation of his judgment, a table of population statistics, a map of New York

City and adjacent territory, and a brief computation of figures.

He took a compass and fixed the radius to a distance that would scale nineteen miles. He placed the pin of the compass at Thirty-Third Street and Seventh Avenue, New York, and swept its arm in a circle.

He showed that within this area there would be by normal growth six million persons in the year 1913, and eight millions in 1920. He asked the directors if they expected to continue to depend upon ferryboats to pierce the center of this great human hive.

His plan extended even farther than getting into Manhattan Island. He looked forward not only to tunneling the Hudson, but to getting possession of the Long Island Railroad and of tunneling a connection to it under Manhattan Island and the East River. His eyes were upon New England, and the Long Island road could be used as a link toward getting into the rich territory of which the New Haven system had a practical monopoly.

In 1900 the Pennsylvania gobbled up the Long Island, and a part of his plan was realized.

The Finished Product.

Then the breath of scandal swept over dozens of big corporations—the Pennsylvania Railroad among them. Cassatt, wounded by harsh criticism, died of a broken heart, his genius overlooked and unappreciated.

Other men rushed his plans to completion, and to-day they have been carried out to the letter. At Thirty-Third Street and Seventh Avenue, New York, a terminal station covering twenty-eight acres, one of the architectural wonders of the world, on which the finishing touches are now being put, stands as a monument to his genius.

From Bergen Hill, in New Jersey, to this station, and there on under Manhattan Island and the East River to Long Island, stretch tunnels big enough for the road's through vestibuled trains. In the river tubes are six and eight-tenths miles of single track, and in the land tubes tracks of just the same length. At the Manhattan Station there will be an initial service of 400 trains a day on the Pennsylvania and 600 trains a day on the Long Island, all coming and going under the two broad rivers.

One of the most interesting parts of the whole scheme, the New York Connecting Railroad, will cost $14,000,000. This road will link the Pennsylvania and Long Island systems to the railroads of New England. It will be built upon a bridge from Long Island City by way of Ward's and Randall's Islands to Port Morris, a station on the New Haven road. From Long Island City the road will run to Bay Ridge, from which freight will be floated across the bay to the freight terminal at Greenville, New Jersey.

Underground Travel.

The new Grand Central Station is to be the center of a network of travel routes. Already the original Subway is one of its arteries, as well as the Third Avenue Elevated and several surface lines. Soon there will be two new subways tapping it.

The Hudson and Manhattan tube under the Hudson is to be extended to it from its present Thirty-Third Street terminal. Then the proposed Broadway and Lexington Avenue tunnel will reach it on the Lexington Avenue side. Before long the unused Steinway tube under the East River at Forty-Second Street will probably be put into service, and will be still another of the Grand Central's arteries.

The problem of getting the people through the crowded city is as great as the one the steam railroads have faced of getting them in and out. There is not another city in the world that presents anything like as serious a problem, not only because of New York's size and rapid growth, but because of its peculiar geographical characteristics.

A glance at some of the amazing transportation figures gives an idea of the hugeness of the task of providing adequate transit facilities. In 1909 the Subway and street railroads of the city carried over 1,409,000,000—almost as great as the population of the earth.

In that year they carried 44,000,000 more passengers than in 1908, and the bulk of this increase was on routes where there was no increase of facilities.

The Growth of Traffic.

To carry this great multitude there are 1,646 miles of single track, 11,623 passenger-cars, and the cost of operating these lines in 1909 was over $44,000,000. During that year the cars ran more than 272,000,000 miles, which would be equal to more than 560 round-trips between the earth and the moon.

How fast the problem grows is strikingly set forth by some figures from the Subway.

The Subway was designed to carry 400,000 passengers a day. During the first two months of its operation it carried 249 passengers a day. That was almost six years ago. In 1909 it was carrying 800,000 people daily—just double the number it was designed to carry!

If no important additions were made to the city's transit service within the next ten years, it would be impossible to handle the rush-hour crowds by the year 1920.

But the city will not have to wait ten years for relief. While there are now less than thirty-two miles of tunnel routes, there will be almost ninety miles more in operation within five years, without counting the through railroad tubes of the Pennsylvania and the New York Central.

Foremost in the new subway system that is about to be begun will be the Broadway and Lexington Avenue lines. This route will consist of a trunk line up and down Manhattan Island, with two branches in the Bronx. It will be over twenty-two miles and will cost $70,000,000. Its capacity will be a million passengers a day, or two and a half times the capacity of the original Subway.

Over $7,000,000 will be spent on a cross-town subway running a mile from river to river under Canal Street. Another subway to be run from the Brooklyn end of the Williamsburg Bridge to connect with the Fourth Avenue Subway, will cost $15,000,000.

New Subways.

Already $16,000,000 is being spent to build the Fourth Avenue Subway in Brooklyn, running from the Brooklyn end of the new Manhattan Bridge to Forty-Third Street, a distance of four miles. Two great extensions of this road are to be built. One will run from the Forty-Third Street terminal to Coney Island, the other from the same point to Fort Hamilton, from which place a tunnel will eventually be built under the Narrows to Staten Island. These two extensions together will measure nine miles in length, without counting the eventual extension to Staten Island.

Still another subway, which is now almost completed, runs from the Manhattan end of the Williamsburg Bridge through Delancey Street to the junction of Centre Street and Park Row, a distance of almost two miles.

Truly, it should be a wonderfully changed city in respect to its transit service five years from now with this great maze of subterranean roads.

Then there is the great problem of handling the commerce of the seas. The teeming city hasn't room for all its ships. Former Comptroller Metz declares that the wheat-shipping terminal of the continent is now Montreal, and that New York has lost this great traffic because of the crowded condition of its port and the expense of its docking facilities.

The demands of the ships are becoming more and more urgent. Every year shows a striking increase in the city's sea traffic. In respect to the number of net registered tons of shipping entered in the foreign trade, New York has just become the greatest port in the world.

A Giant Canal.

It has long been ahead of London and Hamburg, and recently it passed its nearest rival, Liverpool. In 1909 there were 10,959 shipping arrivals at New York, and the value of the goods entered in foreign commerce at the port was $1,311,000.

Mayor Gaynor, who is responsible for the carrying out of this tremendous project, has the best interests of the city of New York more fully developed than had any other mayor.

Here is a man whose every act since his election to the greatest municipal office in the United States is proving that he is destined to become one of the foremost figures in American politics. A keen observer, a talented lawyer, a judge to whom mercy and human kindness are factors of the law, he is looming large on the horizon of 1912 as a possibility for the Presidency of the United States. Such a man is surely big enough to handle the ever-growing transit problems of the biggest city on the American continent.

The present administration hopes to spend $42,000,000 for new piers. Twelve millions of this amount will be spent for acquiring water-front property, and another million will be set aside for preliminary work on the Jamaica Bay improvement in case the bill which is now before Congress providing for an appropriation for that project should be passed.

It is proposed that this new harbor be made the terminal of the barge canal, which now, at a cost of over $100,000,000, is being dug across the State of New York to connect the Hudson with the Great Lakes. To make a more direct connection with the Hudson and the barge route, there is a plan for digging a canal across Long Island from Jamaica Bay to Flushing Bay.

Saying "Good-By" on the 8.

BY JOHN WALTERS.

THE TRUE STORY SERIES. When you just have to hang on, boys, and let her run; when it's useless to jump—simply a question of being dashed to eternity against the rugged rocks of a cut or ground to death when she collides—then you begin to think, and think hard. And, usually, there's only one thing to do, and that is to stay.

And we don't much blame Hawkens if he used words that could only be printed on asbestos when he reached the end of his exciting journey. It was something to be alive to tell the tale.

An Occurrence in the Early Days of the Oregon Short Line When an Eagle-Eye and His Mate Thought that It Was All Over Except the Floral Tributes.

TRUE STORY, NUMBER FORTY-SEVEN.

"COME on, now! Get a move on! 'Tain't no use kickin', for you got to go, an' that's all there is to it!"

This was spoken by a wiper, transformed for the moment into call-boy, after imparting the unwelcome information that my valuable services were in demand for a trip West, starting at 9 P.M.

It was back in November, 1883, at Shoshone, Idaho, on the Oregon Short Line, then in course of construction, the track having been completed a considerable distance beyond the above-named city.

I was firing the engine which hauled material to the track-laying crew at the "front," and ours was the only train operating west of Shoshone at that time, except the one at the "front" which came no farther east than King's Hill station.

Over the track between Shoshone and King's Hill station we therefore held undisputed sway, and might come and go at will as duty called.

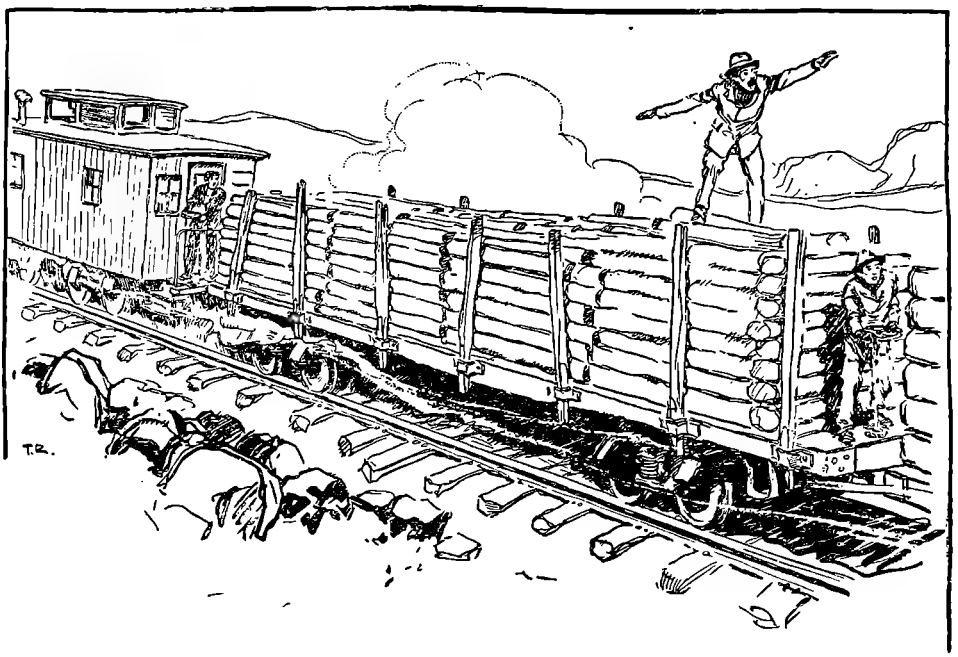
The unexepcted call was not at all to my liking, as most of our work was during the daytime. We had been ordered out—and that settled it.

It developed that we were to proceed to Reverse with caboose only, and there pick up a train of loads. These we were ordered to take to King's Hill, nine miles beyond, after which we might return at will, no train-orders being necessary to govern our movements.

Between Reverse and King's Hill stations there was a drop of nearly nine hundred feet, or ninety-eight feet to the mile for the entire distance. In those days we had no air on the freight-engines or cars, and, it

EDITOR'S NOTE: All the stories published in this TRUE STORY SERIES have been carefully verified by application to officers or employees of the roads or companies concerned who are in a position to be acquainted with the facts. Contributors should give us the names of responsible persons to whom we may apply for such verification, in order that fruitless inquiries may be avoided. This condition does not imply any lack of confidence in the veracity of our contributors, but is imposed merely to give greater weight and authenticity to the stories.

Series began in the October, 1906, Railroad Man's Magazine. Single Copies, 10 cents.



DROPPING TRAINS DOWN SUCH A GRADE WITH HAND-BRAKES WAS A TICKLISH BUSINESS.

might be added, that in the chaotic conditions incident to track-laying over the desert, engines were in luck to have much of anything else on them. Frequently we ran out of oil, and were obliged to use melted lard as a lubricant.

Dropping trains down such a grade with hand-brakes was a ticklish business—nine or ten miles an hour being the limit of speed.

In due time we reached Reverse and made a flying switch of the caboose to the rear end of the train standing ready on the siding. Coupling the engine to the other end, we waited until the trainmen finished examining the brakes and couplings.

The steel rails used were thirty feet in length, and, as the train stood, there were ten cars of steel next the engine, with fifteen cars of ties behind. Frequently these rails were loaded on thirty-foot flats. When this was done the loaders would usually remove the brake-staff, laying it on top of the load, and it frequently would roll off and be lost.

When cars with missing brake-staffs were found on a train, our crew would set them out at Reverse to await the arrival of a car-repairer to supply the deficiency. Naturally, when our crew found all brake-staffs in place and the brake-shoes in good condition, they assumed that all was "O. K." and gave us the signal to pull out.

We learned that there had been a wholesale theft of brake-chains in the Shoshone yards. The cars from which they had been stolen were set out by our own crew, their condition being discovered between Shoshone and Reverse; but they had forgotten it. In fact, there was not a single brake with a chain on the entire train, except the caboose and engine tank-brakes.

Through some one's blunder, the deficiency had been reported to the office in Shoshone as having been remedied and, there being shortage of material at the "front," we were ordered to take them down the hill.

For about two train-lengths from the switch the track was level and there was no necessity for brakes until we pitched over the top of the hill.

Hawkens, the engineer, and I promptly coiled up on our respective seat-boxes as soon as the engine started down the grade. The handling of the train was wholly in the hands of the crew until King's Hill station was reached. But our rest was brief. Suddenly we realized that we were running considerably faster than the King's Hill speed limit.

The track had not received its final surfacing, and was still rough. Looking back, we saw the brakemen running toward each other near the center of the train, stopping at the end of each car to twirl its brake-wheel, and then speed on. On top of the

caboose stood the conductor frantically swinging his lantern to stop.

The brakemen met and, facing the engine, added their signals to those of their chief, swinging their lamps so fast that one was extinguished. We couldn't stop. Were the train standing still the engine could not have held the cars. She was only a ten-wheeler, carrying 140 pounds pressure.

After a few violent oscillations of their lamps, the brakemen turned and ran for the caboose, climbing over the cars of ties like monkeys. Suddenly it dropped back from the train.

They had cut the way-car off and left us to our fate.

Until the caboose dropped back we had done nothing. In fact, there was very nearly nothing to be done. But now we awoke to action.

"What is wrong back there?" shouted Hawkens.

"Give it up, but I'll soon find out," and in an instant I had climbed over the tank to the first car. The brake-wheel twirled in my hands, and a glance disclosed the fact that it had no chain. I raced back four cars, to find each brake in the same condition. The train was making forty miles an hour, and the heavy steel rails began to grind and shift as the cars swung over the uneven track.

Plainly it was up to me to sprint for the engine.

"Well?" was Hawkens's greeting; and I explained briefly.

"Great Heavens!" he cried, "and Chris Long holds the main line at King's Hill."

Chris Long was conductor of the track-laying train, which was then tied up nights at King's Hill station. Hawkens's exclamation meant that if we reached the station by any miracle we would plunge into the waiting train. With our speed, the result could be easily imagined.

Jumping was out of the question. We would have landed in the rock cuts, and the dumps between were strewn with great, jagged stones blasted from the cuts.

We were now running fully a mile a minute, and the speed increasing every second. The crash of the steel, as it bounced up and down, could be heard above the roar of the train, and the ties were beginning to fall from the rear cars, bounding high in the air as they struck.

The engine rolled and pitched fearfully, while behind hung a cloud of dust kicked up by the speeding cars.

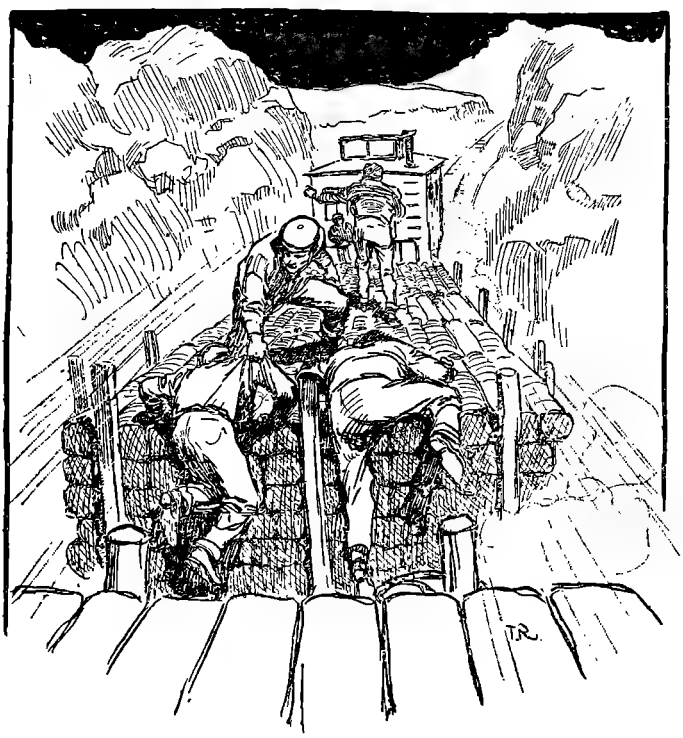
Hawkens reached over and grasped my hand. "Good-by, Frank! It's all over with us," he said.

I can see Hawkens to this day. Calm and cool—not even the least bit excited. He was one of those men who do not seem to know what the word fear means.

But I did. If there was ever an individual scared plumb stiff — scared thoroughly and completely through and through—I was that identical one.

Hawkens cut a section from the bell-cord, and tied the whistle lever down so that it would blow continuously. The crew at King's Hill station might hear it and, guessing what was wrong, get their train off the main line, thus giving us a clear track—if by any chance we reached the station. It seemed that nothing short of a miracle would keep us on the rails that far.

The old 8 plunged and rolled fearfully, but she clung to the track as though she



THEY HAD CUT OFF THE WAY-CAR AND LEFT US TO OUR FATE.

knew a wreck meant utter annihilation. Her drivers, as I leaned from the cab-window and looked down, appeared like solid disks of iron, and her rods flashed up and down at lightning speed.

Suddenly there was a crash and a lurch which seemed to lift the engine bodily from the rails. I felt each individual hair raise straight up from my scalp. I am sure that

"GOOD-BY, FRANK! IT IS ALL OVER WITH US."

I bit a chunk off the northwest corner of my heart.

I sure thought it was the end, and said the first line of "Now I lay me"—all I could remember under the stress of circumstances—but she ran more smoothly.

The speed was too great a strain, and the 8 had stripped herself — wrenched off the driving-pins to which are attached the side rods connecting the drivers.

Luckily, neither rod struck the cab, and the straps broke, releasing them instantly.

Up to this time the internal friction of the engine's machinery had acted as a powerful brake, but how she did run!

The landscape flashed by in a gray streak, and, with every lurch, an occasional rail would bounce from a car, hurling a shower of sparks as it struck a rock and then swirl high in the air.

Hawkens said nothing after bidding me good-by. All that we could do was to await the end; and I can tell you, boys, awaiting the Grim Reaper is one of the most soul-trying things ever experienced by mortal man.

It seemed but a matter of seconds after the engine threw her rods when the slight curve just east of the station came into view. Here, indeed, was the end!

With closed eyes and stiffened body, I prepared myself. On and on she plunged! One moment more and—

I felt the engine round the curve, and there was a terrific crash.

My eyes opened to find the train plunging along over the level desert, with the station far to the rear.

It took several moments to realize the fact that we had actually passed through so horrible an experience without harm.

Our train ran far beyond the station, and when it was stopped finally by a slight up-grade, the old 8 was a sad wreck.

Her rods gone, guides and yoke bent and every box on her blazing, she certainly was a sight!

The track-laying engine came out and pulled us back to the station. The watchman had heard the roar of our train and the scream of our whistle. Guessing what was wrong, as Hawkens had hoped he might, he hastily, and just in time, pulled in on the siding.

A rail fell from our head car and utterly demolished the box-car depot, though luckily there was no one in it at the time. That was the crash I had heard.

In due time our crew arrived, having dropped the caboose slowly down the hill. What Hawkens said to them could only be printed on asbestos. It would set fire to any other material.

As for me, I've ridden pretty fast, both before and since that time. But never did I slip through a bunch of landscape quite so quickly as on that occasion.

They say that when a man knows it's only a question of a few seconds until death swoops down on him and sends him into the great unknown, that all the events of his past life go flitting by in a regular moving-picture dream; but, strange to say, all I could think of at the time was what sort of a place I was going to light on when we struck *terra firma*.

New Mallet 2-6-6-2 Type.

THE Chicago, Burlington, and Quincy Railroad has received ten Mallet compounds of the 2-6-6-2 type from the Baldwin Locomotive Works. They are equipped with an Emerson fire-tube superheater, a feed-water heater having a heating surface of 2,172 square feet, and a reheater consisting of 19 2-inch tubes, 128½ inches long, located in a large 17-inch flue through the center of the feed-water heater. These locomotives are arranged to burn lignite, and will be used in freight service on maximum grades of 1.6 per cent. They are designed to traverse 20-degree curves.

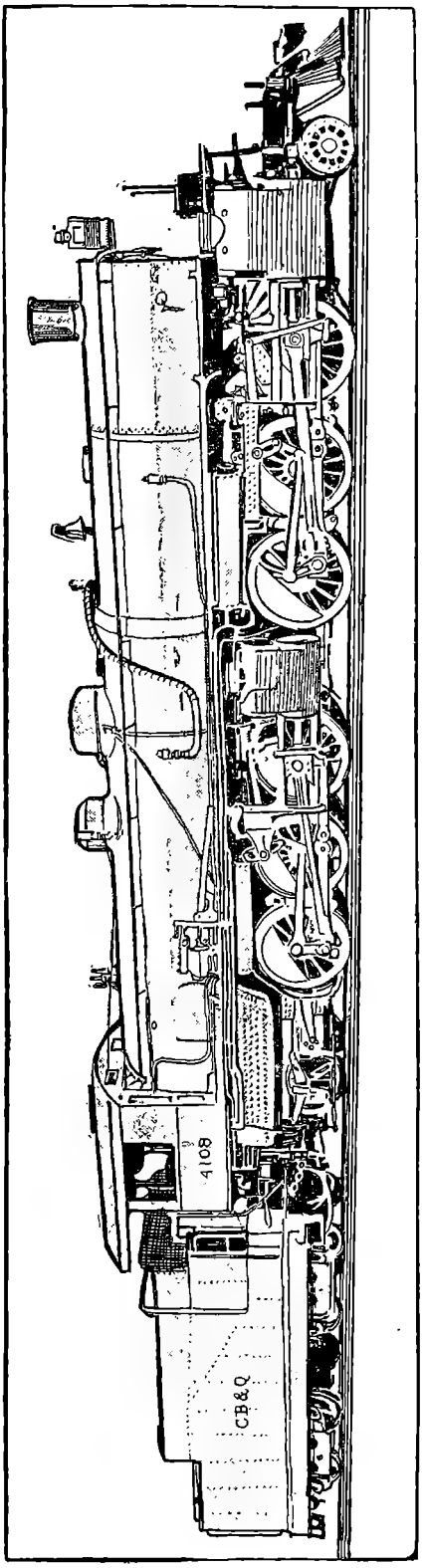
Steam from the throttle-valve, says the *American Engineer and Railroad Journal,* is carried through the usual dry pipe to the front flue-sheet, where it passes through the T-head into the two superheater headers. This type of superheater has vertical headers, which are simply enlarged steam-pipes with the proper walls and passages to divide the saturated and superheated steam sections. Each superheater has fourteen elements placed in two vertical rows of seven each.

The headers have a cross connection at the bottom to act as an equalizer between the superheated steam compartments.

The high-pressure cylinders are cast separately from the saddle, and the steam from the superheater passes into a short passage in the saddle, from which it is carried by a short elbow-pipe to a passage in the center of the cylinders, thence to the 13-inch valve-chamber. The exhaust emerges from the high-pressure cylinders through a 6-inch passage on the back face, from which it is carried to a passage in the saddle by a short section of piping, and thence upward from the center of the saddle through an elbow-pipe to the reheater. The reheater consists of two cast-steel headers circular in shape, between which there are 19 2-inch tubes 128½ inches in length.

These headers have ground ball joints with the elbow-pipes at either end. The discharge from the reheater is carried down to the bottom of the smoke-box and thence through a flexible receiver-pipe to a steel casting which forms part of the front frames, and to which the low-pressure cylinders are bolted.

The feed-water heater is of unusual capacity, and in addition to the large central 17-inch flue has 406 2¼-inch flues distributed over its whole cross-section. It is fed by two non-lifting injectors, the admission being on the center line at either side, and discharge through a check-valve at the top into the check-valves on the side of the boiler proper. The front section of the boiler is separable from the rear section, the joint being just back of the feed-water heater, and all piping or other parts continuing by this joint are arranged so as to be easily disconnected.



MALLET ARTICULATED COMPOUND LOCOMOTIVE, BUILT BY THE BALDWIN LOCOMOTIVE WORKS FOR THE CHICAGO, BURLINGTON AND QUINCY RAILROAD. IT IS BUILT TO BURN LIGNITE, AND IS EQUIPPED WITH A HIGH-DEGREE SUPERHEATER AND REHEATER AND A VERY LARGE CAPACITY FEED-WATER HEATER. THE TOTAL WEIGHT IS 361,350 POUNDS. IT HAS 64-INCH WHEELS.

THE LAW AND THE FACTS.

BY J. R. STAFFORD.

Fearing a Slow Order from the Despatcher, Wright Runs the Gantlet of Misery.

"MIND, you must take no chances, Wright!" The despatcher spoke sharply.

The engineer nodded, and then sidled out of the room and into the darkness of the train-sheds. He hid himself, too; for he was afraid the despatcher would send him a "slow order."

A slow order annuls the schedule. It is given on the theory that a train can crawl, where, under speed, it would take the ditch. Wright wanted no slow order. For this trip this particular night was "extra"—pulling the fast mail.

It was foggy, the rails would be slippery, and the red and the green, like the white, signal-lamps would all shine mistily gray. If, as extra, he could maintain schedule speed he would achieve a great triumph, and inevitably promotion to the regular mail run would be his.

A slow order would shatter the opportunity which was calling to this ambitious man with all the eloquence of all his struggling past.

For fifteen minutes he stood in the shadow of the sheds. Then, when there was not another second to spare, he bounded across the lighted space beyond which the already coupled and waiting mail loomed high and dimly lit. As he looked back from his window in the cab a lantern far in the rear swung straight upward and then sharply down.

Now, just as he put his hand on the little lever of the air-valve, it happened that Miller, regular mail-driver for this very run, came along. Standing just beneath the cab, he stared up at its occupant with the peculiarly sneering smile which says, "You will try, but you will fail."

The smile angered Wright unaccountably. But this anger was nothing to that which he felt a moment later; for, somehow, while fumbling with the air-valve, he did not notice that the brake was off, wherefore he gave the lever a very sharp jerk—just as a very angry man will jerk a horse sometimes.

The result was that the brakes went on again. Only that it was now on the very dot of leaving-time, and the throttle not yet opened, he would have jumped down and he would have fought.

Miller now laughed openly.

Since there was promotion ahead, or at least the very good chance of it, the engineer satisfied his lust for vengeance in the thought that promotion would put Miller out of the mail class. He had another reason for rushing the mail on schedule; so he started off as if nothing had happened.

As he pounded out through the corduroy of frogs to the yard limits he would have been happy but for one fact. His fireman was a younger brother to the master mechanic.

It was quite possible that the young man might, on returning to his brother, tell of the confusion in the handling of the brakes. This story possibly might halt the matter of promotion.

After thinking it over for twenty minutes, Wright got a wrench from the tool-box, and after showily pretending to make an adjustment, he explained to the coal-passer: "The bushing around the valve-stem had slipped a little. It let the handle turn too easily."

The fireman nodded that he understood.

Then the engineer crawled back up into his window, and he drove like a jehu of old. His brain was cool as the snows on the summit of Vesuvius; his heart and its purposes as hot as the fires that seethe below.

Time that he lost on the up-grades because of the skip of the wet drivers he made up on the down-grades by sanding, and then, regardless of curves or trestles, by giving his pistons every ounce of steam.

Under him that engine was his own wild heart that night; a rage, a madness to whirl past clutching accident and to win mightily.

Death, which is the terror of little men, he had flung out of his account.

As a consequence, he came in on time at the first stop—sixty miles out—and there he found congratulations from the despatcher and orders to proceed on schedule.

Station after station whipped by like fleeting things of waking dreams. The fog and the wet night rushed backward as swiftly as Time himself.

Morning came at length. When they were within twenty miles of the end of the run, and were on the schedule to a watch-tick, hurling forward through the gray at seventy miles an hour, a vagrant wind lifted the fog ahead, disclosing, far away, a team and wagon stopped upon the track.

There was no need of taking any chance. Wright jerked his whistle-cord and softly applied the air.

To his surprise, the valve-handle moved over easily, though without effect, upon the brakes. He pushed the handle clear to its bracket. The air was dead.

Then the wind died and the fog fell, hiding the disconcert ahead.

Just at that moment the fireman looked up from his poised shovel and yelled: "Out of commission again?"

Wright knew it was a question about the brakes—and he also knew that if he answered truthfully he must stop at the next siding and report the trouble, or else go on in open violation of an important section of the book of rules.

Secretly, he was willing to violate all sections in order to save this run, which would prove him beyond quibble a great engineer. So he nodded in the negative, and shouted that there was nothing the matter.

He was certain the fireman had not seen the handle against the bracket. He would wait until they had passed the last siding in; then he would pretend he had just discovered the failure of the brakes.

So, when they were within five miles of the switch-tower, which rose like a skeleton of wan lanterns in the morning grayness, he suddenly put his head around into the gangway and shouted, "The air is dead!"

It is not a pleasant thing to be riding at seventy miles an hour without any brakes, especially when one is but four minutes away from a gridiron covered with flying switch-engines and trailing strings of cars.

The fireman uttered a mad oath about engineers who couldn't tell when the brakes were in trouble, and then he fell to dancing to the wild hornpipe which fear was playing for his benefit.

Wright laughed, and, throttling down, was soon running under momentum alone. By the time they were at the whistling-post he was using a little steam again just to keep moving. He stopped on the yard limits, whistled, and then trundled slowly down to the red flag, where a hostler from the round-house waited for the engine. As he got down from the cab, he said to this man: "This air's dead. It happened just a few miles back."

Then the fireman got down, and, with genuine approval, he said: "Wright, it was a great run. If ever any man ought to be marked up, you certainly should be."

Wright felt very good over this. He was sure of his fireman. Nothing now could bar his promotion.

Up at headquarters, where he hurried to check in, half a dozen officials were waiting to congratulate him. They looked at the chalky white dulness which settles under the eyes of a man who endures a long and tremendous strain, and they pretended that he had been scared half to death all the way. They conducted themselves generally like men who are very proud to patronize. Wright was not overfond of this business. As soon as he could do it decently, he got away.

That afternoon, instead of waiting for a run back, as he had a right to, he got leave and went home on the first passenger-train. He wanted to tell his wife and babies all about what had happened, for their approval was the kind he could accept. Besides, the higher pay of the better job now certain would open long vistas of better things for them. He wanted them to know at once.

It was long after midnight when he let himself into the flat; but, just the same, the boy and the girl woke up with their mother, and all three of them got out of their beds and made him tell the story of the run again and again, until he was quite sure that he was not only a very great man, but the happiest one in all the town.

Of the foolish things he did the next morning, as soon as he could find shopkeepers astir, it is as well to say little. He bought all the books that his son would never read, all the trinkets for which his wife had not the slightest use or wish, and all the unimaginably meaningless gimcracks for which his little girl could find neither name nor purpose.

But he made them happy, anyhow; and in doing this he spent—on credit, of course—considerably more than the pay coming to him.

About ten o'clock the telephone rang for him to answer a call from headquarters. He was wanted at once. As this meant his promotion, he hurried across the city, in all a schoolboy's elation, to the despatcher's office.

As he entered the clerks smiled curiously at him, and pointed silently to the door behind which he knew the higher powers were wont to sit in state and put ordinary mortals "on the carpet."

Now, as he was about to enter on a piece of business very rare in the experience of engineers, he felt very proud. He held his head high. It is to be feared that he held himself just a trifle too straight. But then, of course, he did have a right to feel a bit chesty.

On entering the *sanctum sanctorum* he was somewhat surprised to see several persons who were not usually to be found there.

In the first place, besides the despatcher and the superintendent and the master mechanic, there was Miller. What business could Miller have?

The question bothered him not a little. Now that he remembered it, he had a grudge against this engineer for that sneering smile. Perhaps Miller was to be reduced to the ranks.

Then he wondered about his fireman, who was also in the room; but, reflecting that this man had a share in the run, he was glad they were going to honor him also. He decided that the very large and severe gentleman who looked at every one just as a good machinist looks at bolts and nuts must be the general manager.

The despatcher nodded gravely at him, but no one else made a sign of recognition.

This did not seem the proper beginning of a ceremony for promotion; but as his was an exceptional case, he thought, perhaps, that the methods might be exceptional.

"Wright," the despatcher said, "what were you doing between the time you left me night before last and leaving-time?"

Now, if the engineer had been alone with his questioner he would have answered that he had been hiding in the sheds for fear of a slow order; but, in the hearing of these other men, such an explanation seemed silly. He shifted uneasily on his feet, and answered: "Why, jist a loafin' around in the sheds. That was all."

"You are sure you were not doing a thing?" It was the superintendent who asked.

The superintendent was a stout man with a stubby nose and an air of vast importance. People grew angry at him without knowing why.

Wright answered him sharply: "I suppose I ought to know."

"But you don't suppose other people do, eh?" the master mechanic insinuated.

Wright stared from one to the other curiously. Even his show of curiosity could not hide the anxiety which this meaningless attack was heaping upon him.

"If you had not been doing anything," the master mechanic continued, "why were you so nervous when you pulled out? Were you afraid of the run?"

"Me nervous? Afraid of the run? Well, I guess not!"

"No, I suppose you were not afraid of the run," the official admitted; "but, plainly, you were nervous about something. Why did you come skulking up to your engine at just the last second, and then, after releasing the air-brakes, throw them on again, when you already had your high-ball?"

Wright hesitated. It was clear now that the fireman had come straight back and told of that awkward manipulation of the air at the start. This explained Miller's presence, also.

Deciding that it was unwise to quarrel, one against two, in the presence of superiors who weighed evidence just like other people, he simply answered: "Well, I may have been a mite nervous."

"Did you tell this man who was firing for you that the bushing around the air-valve stem had worked loose?" The question flashed from the master mechanic's lips like a shot from an ambush.

"Yes," the engineer faltered, being quite thrown off his guard, "I did, but—"

He was afraid to go on and tell the whole story. Since he had done nothing wrong, now that he found himself under some strange suspicion he half doubted his facts. The facts, somehow, seemed like to get him into farther trouble.

The general manager took a hand. Very slowly he asked: "My man, did you really throw off your air; then throw it on again; then off a second time, after you had your signal to be under way?"

"Yes, I did. You see—" But since this only required more extensive explanation, Wright hesitated. The general manager was

really a formidable personage. He was brief and direct.

"That is enough," the great man replied. The case seemed to be closed.

"Step into the other room a moment, please." The despatcher addressed the mystified engineer. "I will call you when we are ready."

Wright obeyed. Within five minutes he was recalled.

The despatcher began with grave kindness: "My man, I greatly deplore this whole matter, and I would feel, in a measure, responsible for it but for the fact that your purposed disabling of your air-brake discloses a cowardice altogether despicable. I felt that I should have given you a slow order.

"I looked round a few minutes after you stepped out of the office that night, intending to consult with you as to the propriety of a slow order. Your fear that you might have to go on without one seems, however, to have forced you to the foolishly desperate thing you did.

"Now, we have known you to be a good and faithful employee, and fairly skilful; and, while there is no proper excuse for such an act as yours, we are going to give you another chance. After a thirty-day lay off, you may report for duty. We will then do our best for you."

Wright stood petrified in his astonishment at this outlandish vagary from the lips of a sane and responsible man.

Then he began laughing; but as he laughed he saw that they exchanged most significant glances. Sudden anxiety filled him; and when he knew this showed in his face, he saw them smile as if they were now quite sure of him.

Beyond doubt it was up to him to clear away the folly of these men, so he prepared to open a discussion on broad facts.

"Gentlemen," he said, "I took the mail over the division on schedule time. I don't understand this quibblin' about the air; but it looks to me that a man could hardly run sixty mile an hour for a little over nine hours if he had lost his nerve. I'm not much on argyin' points, but I'd like to have some o' ye answer me that."

"You might not need an answer if you would admit that we know the facts," the master mechanic snapped; "but, since you don't admit them, I'll explain.

"After you fixed the air-brake, it was not immediately out of commission. It would not be, either, until the loose piece of packing worked into the right spot in the air-pipe. Naturally, just like any other man who could do such a trick, you reasoned that it would be unwise to discover trouble until it was apparent to your fireman.

"Knowing as you did that at any moment your deliverance from schedule speed might take place through the gradual working of the clog of packing, you could drive to the very limit. You would drive to the very limit, too, because that would very likely cover your tracks."

"Say!" Wright demanded fiercely. "What sort of a frame-up is this? I'll punch somebody's head for this."

"Punch your own!" the master mechanic advised.

At this, every one laughed so heartily that Wright was constrained to believe there must be some humor in the situation.

It struck him that this was a great deal like the promotion tactics of certain secret orders to which he belonged. The notion, in view of his own undoubted facts, seemed tenable. He smiled foolishly, like a candidate who has just ridden the goat, and then, like a waiting candidate, he waited.

"My man," said the despatcher quietly, "we are now done with you. Keep straight, and report in thirty days. Drop into the office once in a while, and let us know you are alive."

"Oh," the engineer gasped with a fatuous smile, "don't I git my promotion now? Ain't you done with the foolishness?"

"Foolishness!" The despatcher stood aghast. "My man, we were never more in earnest in our lives. And as for your promotion, let me tell you, sir, that we have violated every precedent in not discharging you."

Wright turned to the door. He opened it. At last he swung it shut behind him. Still they did not call him back.

He remained in the outer office until near noon; but when the officials came out they passed by, obviously avoiding the sight of him. He went outside then and wandered in the yards for two hours, but he found no friend, nor any clue to cheer him.

At length, he came back to the office and sat down on the bench opposite the bulletin-board.

A new notice posted there caught his eye. It was his suspension for thirty days.

Now, all this was so preposterous that he determined on immediately setting things right, regardless of consequences. So, wheeling round, he pushed open the gate in the

railing and, notwithstanding the clerks, strode to the door of the private office.

Without knocking or hesitating, he opened it and stepped in.

The despatcher laid down his cigar with a smile, and said: "I told them you would break in, to own up, when you took a notion. I'm glad you came. It would have disappointed me if you hadn't come at all. It would have been very unflattering to our intelligence. Now, own up, and then we can start again with a fair understanding."

"Say," Wright demanded, "d'ye know why I left ye the other night? Did ye know I left because I was afraid ye would gimme a slow order? Well, that's the size of it."

The official put one hand over his mouth, while with the other he pretended to fan himself. He laughed immoderately.

"You fellers"—the engineer lost all control of himself now—"are a bunch o' lunatics in this deal. Say, d'ye know that I took the mail through on time when they wasn't any other man on the whole job here that would have tried it?

"D'ye think that a man that will risk his life that way for a better job is goin' to lay down because a lot of dumbheads over him have got their wires crossed?

"Say, I took that train through the way I did because I knowed no other engineer could do it. I done it because I've been an engineer for sixteen years, and been willin' all the time to take every chance that might lead me a little nearer to the top!"

There was something so meaning in his tone and manner that it bespoke real desperation.

The despatcher stared at him for a full minute. Smiling curiously, he replied:

"Very well. In view of what you say, there may be a very excellent reason for our reconsideration of this matter. In fact, I shall have it reconsidered at once."

"When can I git your answer?"

"We will act rather for our own enlightenment than yours. But the finding will perhaps be had to-morrow."

There was something akin to threat in the despatcher's manner.

Suddenly Wright felt abashment at the thought that his intrusion on this man must have been the cause of offense. He shambled out of the room.

Three days later, when he was able to bring himself back to headquarters, he discovered that his name had been taken from the bulletin-board.

He stumbled over to his pigeonhole in the engineers' rack on the wall. He fished out of it a thin, yellow envelope. His fingers shook so that he could barely tear the paper; but, at length, he succeeded. A check for all the money due him from the company fluttered in his grasp, but the certainty of his discharge was what the bit of paper really conveyed.

Discharge, when a man has every right to expect promotion, is, of course, heart-breaking; but discharge under suspicion is even a more terrible matter. This is especially true when the unfortunate has spent his prime in fitting himself for a work from which the least suspicioned are always jealously excluded. Wright's knees shook under him as he left the place.

He walked slowly down through the sheds toward the network of tracks beyond which, a mile distant, the roundhouse lay long and low in smoke.

Miller, sauntering, met him and smiled that same triumphantly sneering smile which seemed to say, "You will try, but you will fail."

Wright understood the whole matter now. It was clear that this old rascal, fearing retirement to the lower pay of a less important run, had in some way engineered this whole trouble.

He was disposed to knock him down and half kill him right there; still, he reflected that it was the loss of his job, and not Miller's hand in it, that was likely to ruin him. So he grinned as affably as he could, and stopped. Miller stopped, too.

"You're off to-day?" the older man inquired with the peculiar impudence of one who knows there could not possibly be any doubt in the matter.

"Yes," Wright answered, "just for to-day. I got some personal business to attend to. I'm a lookin' for the scalawag that tinkered that air-brake on my engine.

"Jist between you an' me, I have to pertend that I'm fired. The despatcher is a going to do the same thing. We figger that this dub won't find out that anything is suspicioned of him: then, some day or other, he'll git funny an' give it all away."

Miller's mouth gaped and his eyes bulged. He seemed to pull himself together, and said he believed it was a fine scheme, but that he was in a terrible hurry and must go.

He started toward headquarters as if he expected some one from behind was about to take a shot at him.

Even in his dilemma, Wright was amused. He went on toward the roundhouse.

The wipers and hostlers were friendly with him, so he had no trouble getting inside—nor was he asked to explain why he loafed.

By nightfall he had learned two things: Miller had been in the cab of that engine that night, and had actually run it up from the roundhouse half-way to the station. The other fact was that, by taking out the bushing around the air-valve stem, one might loosen the packing and crowd it down into the pipe with the blade of a pocket-knife.

He knew now just what had been done, just when it had been accomplished and how—and, also, who was responsible.

But next day, when he came back, every one laughed at him. After a long time he learned that the despatcher and the others had discharged him because they thought he had tampered with the air in order to make his run appears the more marvelous; and, as this was a thing that really he might have done, too—had he thought of it—he was struck with a kind of helpless notion that, somehow, this business fitted him so closely that he would never get rid of it.

Nevertheless, he hung around the yards and the roundhouse. There was nothing else for him to do.

Though he had become quite hopeless, just as a man does when he dreams that facts are not as enduring as the hills, he still tried to plan some *coup*. After four days he decided on one. Then he went down to headquarters, and, finding Miller, said:

"I got next to it. And what happened to me is a goin' to happen to the very feller that done me."

Miller hurried into the despatcher's office.

Wright got out of the building as quickly as he could. Hiding himself behind a pile of trunks, he peeped, and presently saw Miller and the despatcher come out and look around as if they searched for some one.

Then the despatcher laughed and made signs at Miller, like a father when he thinks the imagination of the son has been playing him tricks.

"Go off," Wright heard the official advise, "and soak your head. Wright's not here, and I don't believe he has been. I can't imagine whatever put it into you to come with such a story, even if it was so. If I hear of it again, I'm going to have you tested for something more than your eyesight."

The watcher saw him turn back into the building.

But as Miller came slowly down the platform, Wright slipped along from pillar to pillar and truck to truck, keeping abreast and yet concealed. At the far end of the sheds, however, he came boldly out and said: "Now I have you!"

Instead of replying, Miller jumped sidewise and hurried down through the yards.

Wright smiled, and sat down at the end of the shed. Until he had seen Miller vanish into the smoke-cloud of the roundhouse, he did not stir. Then he got up and ran down there as fast as he could. He lurked along from stall to stall until he came to that one in which stood the engine for the mail run that night.

Sure enough, Miller was sitting up in the cab just as if it were about leaving-time. Two or three wipers were gathered round the footboard. They were trying to find out what he was doing. When he would not answer, they advised him to look at his watch and see if it were five hours fast.

Wright sat down outside.

After two hours it was six o'clock, and the day wipers were leaving for the night; while the night force came stringing in with their lunch-baskets on their arms.

Wright saw Miller get down out of the cab and start as if to come toward him. Then he showed himself.

Miller fell back, and began asking a greasy helper for a bit of supper; but the helper wanted to know why an engineer needed to have his meals carried to him when he was off duty, and, receiving no explanation, kept his bread and cheese.

Wright continued to sit at the door like a terrier at a rat-hole.

When nine-forty o'clock came, Miller crawled out of his cab and, calling a hostler, ordered him to take the engine up to the station. The man shook the piece of waste with which he was wiping brass and spat on the ground.

"Not on your tintype!" he growled. "Do you reckon I'm goin' up there jist to walk back, an' you a goin'? Well, I guess not! Whoever heard of such a thing?"

No one had. A half-dozen of his fellows had now gathered round him, and they took his part.

Miller, when he saw he must, backed the engine slowly out upon the switch.

Just as the footboard was passing the stall-door, Wright swung himself up and inside the cab. As soon as the engine struck the main switch he said: "Now, Miller, loosen up that bushin'!"

Miller turned around. Hunger, and anxiety, also, was in his face, and he would have been very angry had he dared. But he

was afraid; so he tried to smile. He was like a boy caught with a stolen watermelon.

"Loosen that bushin'!" Wright commanded again, and as if to enforce his order, he picked up the coal-hammer.

Miller got his wrench and worked slowly.

"Whoa!" Wright snapped. "Shut down! Stop right here till ye git it done!"

As he spoke he lifted the hammer with the apparent purpose of bringing it down on the other man's head.

Miller shut down.

"Now, jist be quick about the business! Ye know how it's done! Yer an expert. An' it's well ye are one. Otherwise ye wouldn't git up to the station in time to git out."

Miller took out the bushing and started to put it back again.

"Loosen the packin' first!"

The packing was jabbed and jabbed.

"Do it right!" the intruder thundered. "Ye got to fix it so the handle jist goes around of itself whenever ye touch it — or ye don't git away!"

Presently Miller announced that the job was perfect. Evidently it was, for the air seemed entirely out of commission.

"Hold on a minute longer!" Wright ordered.

It was now within two minutes of leaving-time, and the distance up to the station was a quarter of a mile. When the minute was up Wright swung down into the darkness, and he stood there until he saw that Miller, in his anxiety to get coupled up, was backing under a big head of steam. Then he went home.

The next morning, early, four policemen and a couple of deputy sheriffs came to his house and took him to the police court.

The despatcher, the superintendent, and the master mechanic were there already, and they had Miller and four lawyers with them.

The police judge was a very busy man. He could not be otherwise, as he was permitted only to send to the workhouse people who should be hanged; wherefore, they were always coming back to him.

For the same reason he was petulant, as a man always is when he knows the job will have to be done over again next week or next month.

He peered sharply over his spectacles at Wright, and spoke just as if he were shooting at him with an automatic pistol.

"You starved this man yesterday. You assaulted him. You made him break his engine. You made him back into his train so fast that he couldn't stop. He made a horrible mess of the mail. He tied everything up over there in the switch-yards for half an hour last night. What have you to say?"

Now, Miller, who had winced at this recital of his accident, made haste to venture an explanation, as men in such situations as his often do.

The judge turned as if to devour him.

"What's this? You act and talk like a very smart man! No doubt of it! Perhaps you know better how to conduct this case than this court! Perhaps you had better tell the whole story!"

A very wise man would have seen that this was nothing more than an invitation to step out and be squelched.

But Miller was very sure of his facts. Moreover, he did not want the newspaper reporters to go off with the impression that it was his awkwardness that had tied up the mail. So he told in great fulness just what had happened.

He even went back to the night when Wright's trouble had occurred, and explained how his own presence on the platform might have given Wright suspicion. So far as the mere wording and the facts, it was a pretty well-told story; but it lacked one great quality to make it ring true.

It lacked Miller's resentment for what Wright had done; and, lacking this, it seemed the most absurd yarn ever told in a police court.

Every one laughed at the story-teller's dulness. Every one but the judge. He half-rose out of his chair and thundered: "One hundred days for this, Miller! Mr. Clerk, mark the arraignment as for perjury and conspiracy! Discharge this man Wright; for if Wright really did what he is charged with doing, then it's a moral cinch he was doing it to undo something this old fraud had done to him! Next case!"

As Wright stepped out into the street, the despatcher took him by the arm and demanded: "Say, how about it anyhow?"

"I guess the judge was right," the engineer replied.

"Say, old man!" The despatcher was now steering him down the pavement at a great rate. "There is no use trying to go over the heads of these courts. I've seen what happens to a man that tries it. But you just let me shake your hand every time I see you the rest of my days. We'll let the whole matter, from start to finish, abide by the judge's decision."

Ten Thousand Miles by Rail.

BY GILSON WILLETS,
Special Traveling Correspondent of "The Railroad Man's Magazine."

MR. WILLETS met an I. C., man at New Orleans to whom he said, "I am after 'G. A. R.,' yarns south of the Potomac." The railroad man smiled blandly, and handed our traveling correspondent a card on which was inscribed: "GLAD U KUM." Then Mr. Willets explained that "G. A. R.," seemed a bit unusual and treason-like to him.

"The Mason and Dixon line is a dead one down here," said the I. C., man. "'G. A. R.,' in the South, stands for Grand Army of the Rail." And then this good fellow coupled a few yarns onto the Willets Special-Story Train. He told, among others, the story of how Colonel Lampton and four hundred husky railroad boys drove the last outlaws from Louisiana, which proves that railroading in the South has been as strenuous as railroading in the West.

To say that we thank the boys who have given Mr. Willets these good yarns, is to express the smallest part of our appreciation. You're all right, boys, and "Here's to you!" from the con in the magazine caboose.

No. 3.—THE "G. A. R." SOUTH OF THE POTOMAC.

The Louisiana Outlaws—Mark Twain's Oratory—Is It a "He" or a "She"? The Pajama Party—Coble, the Hero—Money To Burn—The Kindness of Railroad Men, and Others.

LAWRENCE LAMPTON, president of the Banner Logging and Railroad Company, received a letter written in glaring red ink, and bearing the alarming sign of the skull and crossbones, and reading thus:

> This is the last warning. Stop running your railroad. THE BAMBERS.

"The Bambers be hanged!" exclaimed President Lampton.

He called in Mr. Preston, the superintendent of his railroad, showed him the letter, and said:

"I'm going down to New Orleans to-day to see the Illinois Central division superintendent about this matter. Some of his detectives had a lot of experience in this parish three years ago, wiping out train-robbers who were holding up I. C. trains about every third night.

"I'm going to borrow some of those detectives and begin a war of extermination on this Bamber crowd. Either the outlaws leave the parish, or this company ceases business."

This happened at Kentwood, Louisiana, in Tangipahoa Parish, about eighty miles north of the Crescent City. The Bambers was the name given to those who objected to the new logging railroad which the Banner Company had recently built through the parish—a twelve-mile line connecting with the I. C. at Kentwood, where the company had the largest of its lumber mills.

Series began in June Railroad Man's Magazine. Single copies, 10 cents.

From Kentwood the line ran east to Gilltown, the stronghold of the Bamber gang—the last outlaws left in Louisiana, their leader being wicked Monroe Bamber.

The first shot in this war was fired by the Bambers on the very day that President Lampton received the skull-and-crossbones letter and went down to New Orleans in quest of the help of Illinois Central detectives.

That same morning four men, led by Monroe Bamber himself, jumped aboard the engine of the logging train at Gilltown, the eastern terminus of the little road. The outlaws compelled the men in the cab to start the train for Kentwood, threatening both with instant death.

Thus the Bambers took possession of the train and ran it down the line, stopping at every place where the Banner Company had men at work, and warning them to quit their jobs at once or die. Along the line, they nailed to the trees written warnings to the company's workmen to leave the parish.

Varnado, the Valiant, Falls.

At one place at which the Bambers stopped the train they found a gang of section-hands bossed by De Witt Varnado. Varnado was ordered to call his men off, or suffer the penalty of death.

The section-boss, after listening to the threats, deliberately turned his back on the outlaws and ordered his men to proceed with their work.

Then the first shot was fired in the war of the Bambers and the Banners. It was fired at the brave Varnado, and was followed at once by two more shots, the third killing him. His men, horrified witnesses of the murder, abandoned their work and took to the woods.

Down the line the train proceeded, the Bambers keeping the engineer and fireman covered with rifles till the end was reached. Here Monroe Bamber and his three pals rushed into the office of the Banner Company, confronted Superintendent Preston, and informed him that unless he quit his job he would be killed.

Out of the building the desperadoes marched the superintendent, warning him that if he was found within the parish the next day he would be shot. They returned to the train, and again compelled the engineer to run back to the eastern terminal.

Arriving at Gilltown, the Bambers found that the section-boss at that point, William Magee, had kept his men at work all day, though he, like all the other section-bosses, had been told to quit.

An hour later, Magee, while on his way home, walked into an ambush, and was murdered by the Bambers, three bullets piercing his body.

Mustering His Army.

That night President Lampton returned from New Orleans, and was told of the above happenings.

"I'll fight 'em!" he shouted. "Fight 'em to a finish!"

President Lampton had come down to Louisiana from Michigan. He got his fighting blood from the Gridley's, being a cousin of the naval captain who had achieved fame at Manila on receiving Dewey's command, "You may fire when ready, Gridley."

President Lampton's first move was to rush over to the Illinois Central Station and send a telegram to the superintendent at New Orleans, requesting that the detectives be sent up that night by special train.

He sent another wire to New Orleans ordering four hundred rifles and ammunition. He ordered two of his men to scour the country, find four hundred horses, and hire every one of them.

He returned to his office, and summoned all the men connected with the Banner Railroad to appear at headquarters immediately. He sent similar word to every one of his mill-hands. The railroad men and mill-hands mustered four hundred strong.

Mr. Lampton addressed his boys. After reciting the story of the expulsion of Superintendent Preston and the murder of the two section-bosses and all the rest of the lawless work of the Bambers, he announced that his mills at Kentwood would close down, that the railroad would cease running, and that he would organize all the men there assembled into a regiment—every man to be armed and mounted—to proceed against the Bambers.

Their Banners Flew High.

"Our charge on the camp of the Bambers will go down into history as the Charge of the Four Hundred of Tangipahoa Parish!" Mr. Lampton concluded. "Now then, will you, boys, rally to the standard of the Banner Company in the name of public safety and community progress, or won't you?"

"We will!" thundered the Four Hundred.

Two weeks later the war of the Banners and the Bambers ended in victory for the Banners.

The Bambers, who could muster only a hundred men against the four hundred armed and mounted soldiers on the Banner side, agreed to surrender provided they be taken to New Orleans, where they would be safe from lynching.

President Lampton agreed to the condition—and within a week the Banner trains were running as usual and the mills were again in full blast.

Down in Virginia.

Engineer Bell and Fireman Burton sat in the cab of the 103, waiting for the signal to get out. Brakeman Shoemaker shouted to Superintendent Reese, Master Mechanic L e w i s, and Superintendent of Rolling-Stock Sanderson that the Pullman sleepers were way down at the end of the train, and that they would have to "get a skate on."

Conductor McGuire shouted, "Let her go, Bell!" then hopped aboard the first train to run over the Virginia Railway.

This happened at 8.30 on April Fool's night, 1909. The place the historical train started from was Roanoke, Virginia. It consisted of twelve passenger-coaches and two Pullman sleepers loaded with business men of Virginia and West Virginia, through which the new road ran for a distance of four hundred and forty miles, from Norfolk to Deepwater.

The passengers were bound for Norfolk to take part in the festivities in honor of the opening of "The road that Rogers built."

The next day was the greatest in the existence of the late Henry Huddleston Rogers.

He himself said so, even though he had put money into the Virginia Railway with a shovel—thirty whole millions of dollars, and all of it out of his own cash-bin.

The road was now all paid for, and Mr. Rogers and his friend, Mark Twain (the late Samuel L. Clemens), were at the Norfolk Station to witness the arrival of the first train over the line.

When Engineer Bell jumped down from the cab, Mr. Rogers shook his hand and

McGUIRE CLOSED HIS WATCH, SAYING: "IT'S ALL OVER, BOYS."

told the crowd that he was happy as a prince with just the bulliest new toy—a railroad that would help a lot of people in Virginia and West Virginia to acquire a degree of prosperity such as they had never known before.

The Orator of the Day.

Engineer Bell, having been thanked by Mr. Rogers for bringing the first train safely down the line, then followed Mr. Rogers and Mark Twain and the crowd over to the

Monticello Hotel, where a great public reception was held.

With Engineer Bell went many other boys of the new Virginia Railway; and when the reception began, some of them stood near the receiving-line and watched the handshakers pass by.

There were fully a thousand handshakers in line; and when the doors opened, those at the head started in by shaking the hand of a man with long white hair and a long white mustache, congratulating him upon the completion of his railway.

Engineer Bell, hearing the words addressed to the white-haired man in question, snickered. At the same time, Fireman Burton simpered, Conductor McGuire chuckled, and Brakeman Shoemaker laughed out loud.

Moreover, among those who stood near the white-haired man was Governor Swanson, of Virginia. Noticing what was happening, he did his best to suppress a smile, while United States Senators Daniel and Martin stared in amazement.

When the thousand business men of Virginia and West Virginia had shaken hands with those on the receiving-line, the crowd yelled:

"Speech! Rogers! Rogers!"

The white-haired man who had been congratulated by so many of the crowd mounted a chair and said:

"My friends, while I have been shaking your hands I have listened to some very fine compliments. I could not help but feel flattered as you passed me and thanked me so sincerely for the splendid road I had built through your State. I like compliments, gentlemen, and I thank you."

"We Want Rogers!"

These words caused a great roar of laughter, and for the first time those who had congratulated the speaker realized that they had made a mistake.

"Speech!" again roared the crowd. "We want Rogers!"

This time arose another white-haired man.

"Gentlemen," he said, "it is my business to build railroads. I employ my orator here to talk about them," and he laid his hand on the shoulder of the speaker who had preceded him, Mark Twain.

Five weeks passed — only a short five weeks after that happy day in the life of Henry Huddleston Rogers. Engineer Bell and Fireman Burton sat again in the cab of the 103—not at Roanoke, but way down the line at a lonely spot in the hills of West Virginia. The train had come to a stop.

Conductor McGuire and Brakeman Shoemaker were standing beside the engine, McGuire holding his watch and consulting it from moment to moment.

Finally McGuire removed his cap. Engineer Bell and Fireman Burton also uncovered.

McGuire closed his watch, saying: "It's all over, boys."

At that moment all that was left of Henry Huddleston Rogers was being placed in a sarcophagus at Fairhaven, Massachusetts.

All the wheels of the new Virginia Railway were standing still, and all its employees were standing motionless, with bared heads.

The Sex of a Locomotive.

Mr. Richards is the industrial agent of the Southern Railway. He is an all-round hustler and whooper-up of the superior advantages of life in the Southern's territory. He has been on his job for years, and knows the field south of the Potomac as thoroughly as any division superintendent knows his own division.

Mr. Richards is, moreover, the editor and publisher of all the Southern's literature pertaining to farms, mines, manufactures, immigration, and homesteads—a large quantity of which literature was given to me by the chief clerk at Mr. Richards's Washington headquarters.

From the pamphlets I made one clipping, put it in my pocket, then went out to the railroad yards beyond the Union Station, stopped in at the hostler's shanty that stands within the shadow of the Capitol, made the acquaintance of the engineers gathered there, took out my clipping, and said:

"You all know Mr. Richards, don't you?"

"Bet we do. He's to the Southern Railway what Secretary Wilson is to the government. He's the grand master farmer of the outfit."

"He's something more than that," I said. "He's a novelist, a poet, and a prince of descriptive writers. I made the discovery about forty-five minutes ago. For example, here is his description of a locomotive. I clipped it from one of his monthly agricultural papers. It appears under a picture of one of the Southern's new engines. Let me read it to you."

I read as follows:

"The horse of steel stands at the head of all material creations of man. With a good way

"HE CRAWLED ON AND ON TOWARD BROWN SUMMIT."

for his feet, he moves along a thing of beauty and of use beyond compare. He presses forward as incessantly as the minutes and hours. He has intelligence: listens to the banging of the wheels to test their soundness; has pleasure when his joints are eased with oil; keeps tab on his driver; peers ahead with his Cyclopean eye, anxious to make time and connections without trying to pass a brother on the same track, or go nose down in the water, or be forced off sidewise over an embankment. This elephantine horse has individuality and character; he has a will of his own and fixed habits, even as the ship of the sea."

"*He!*" exclaimed one of the Southern's engineers, Hy Davis. "Humph!" he added.

"What you humphing about?" asked one of Hy Davis's confrères of the throttle. "That writin' is O. K. and all to the good."

A "He" or a "She"?

"*He!*" repeated Hy contemptuously. "A locomotive ain't a *he*. A locomotive is a *she*. *She* wears an apron."

"So does a waiter," put in one of the men. "So you can't prove female sex with an apron."

"Well, she wears a jacket," said Hy.

"So do bull-fighters and bell-hops," insisted one of Hy's friends.

"She's always attractin' the attentions of men," persisted Hy.

"So do Congressmen in that building across the way," protested another.

"But she's got a *lap!*" cried Hy.

"You win!" chorused the engineers. "It's true. A locomotive's got a lap. Yes, she's a sure-enough female."

"Which proves," said Hy, "that Richards ain't a real railroad man. He's just a novelist. When he wrote about the steel horse, he meant the steel mare."

The Pajama Party.

"Talking about Mr. Richards not being a railroad man," said that same Hy Davis, as I walked down the yard with him, "reminds me of Trainman Lew Jacobs.

"Lew was in that wreck, three weeks ago, down near Greensboro, North Carolina, when No. 11, on the Southern, dropped twenty-five feet from a trestle into a river, like an elevator dropping from a third story to the cellar.

"When it was all over except the hospital attendance and the funerals, Lew found himself sitting on top of a Pullman alongside of a dark-skinned man with a black mustache, who suddenly took off his overcoat and threw it over to dry land to a woman who really needed it, for the smash had come before getting-out-of-bed time in the morning.

"The dark-skinned man, having thrown his overcoat to the woman, was now arrayed just as he was when thrown from his berth —in blue pajamas. Lew looked him over a moment, then said:

"'You're all right, sir; yes, you are. I'll help you down off this roof.'

"'You're one of the trainmen, are you not?' replied the shivering man. 'Never mind me. You go help the others first. I'm a railroad man myself—and I'll wait.'

"'You're a railroad man, eh?' said Lew. Then he sprang the moth-eaten and moss-covered test, like this: 'What *time* do you guess it might be, sir?'

"'I should say about half past seven,' was the answer.

"Thereupon Lew looked sideways at the dark-skinned man a moment, then said:

"'You ain't been a railroad man long, have you?'

"'Why do you ask that?' the pajama-man inquired.

"'Because among us railroaders the time is about seven-thirty. You better let me help you down?'

"'Go help the others first,' said the shivering man curtly. 'I'll take care of myself.'

Let George Do It.

"Well, Lew slipped off the roof of the Pullman into the water and swam across to where a shattered day-coach lay on its side in the stream, from which Conductor Coble—good old Georgie Coble!—was just pulling himself loose. He was pretty well battered, and hardly able to stand on his feet. When Lew came up, Coble said to him:

"'Saw you talking to George Gould. Is he hurt much?'

"Trainman Lew Jacobs gasped, looked across at the pajama-man on top of the car, then said:

"'What name did you say?'

"'George Gould, Jay Gould's son, president of the Mop and a few other roads. How'd he come out of this?'

"'He's all right, but I'm all in wrong,' Lew replied. 'Mr. Coble,' he added, 'I want to tell you that this here business of trying to spot a real railroad man by just askin' him the time o' day is all on the gabosh, and isn't worth a picayune as a test.'

"Then Lew Jacobs got as busy as a gas-meter helpin' victims from the wreckage—goin' fast as he could to everybody in sight, but carefully avoiding that pajama-man perched on top of the Pullman.

A Con Named Coble.

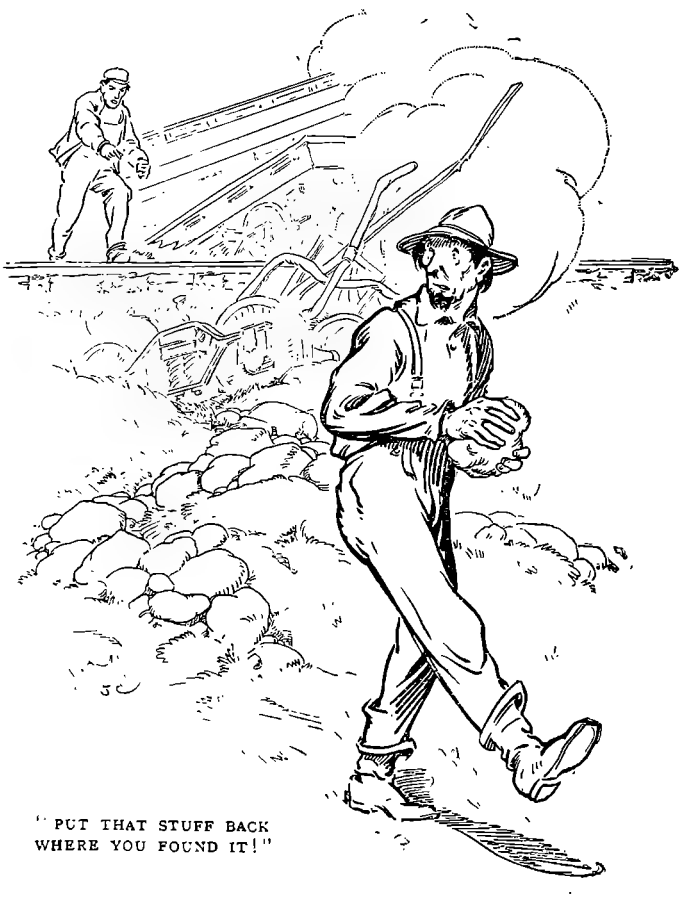
"And now," continued Hy Davis, "let me just tell you the name of the one largest hero among the crew of that wrecked train. He was that selfsame conductor who asked Lew Jacobs about the health of George Gould — Conductor Georgie Coble. That conductor, I'm telling you, was himself badly injured and some shattered as to nerves. Yet he had courage left and to spare, you just bet.

"What'd he do? Well, this is what he did.

"Georgie Coble allowed that all those who were able-bodied ought to stay at the wreck to give first aid. Yet some one would have to go to the nearest telegraph office and send for a relief train. And Georgie Coble allowed that the man who ought to go after the relief was himself.

"The nearest telegraph office was two miles away—and maybe three. It was at Brown Summit, North Carolina, and toward that place Georgie Coble now began making his way.

"He stumbled along for a furlong or so, then took to his hands and knees and crawled over the ties—for I'm telling you that Coble was badly injured, and



"PUT THAT STUFF BACK WHERE YOU FOUND IT!"

while he was crawlin' he was sufferin' all kinds of agony.

"He had not only been smashed in the wreck, but had narrowly escaped from drowning. And so he was sick at his stomach, and his clothes soakin' wet, and the December morning awful cold—still he crawled on and on toward Brown Summit, at last arrivin' at the telegraph station on his hands and knees.

Just as he finished telling the operator there what to do, Georgie Coble lost all knowledge of things here on earth.

"Pretty soon the relief train that Coble ordered came down from Greensboro.

"I'm telling you to make a note that the hero of the wreck at Reedy Fork Trestle, about the time of the last pay-day of nineteen-nine, was a conductor named Coble."

Money to Burn.

Thomas Franconia, foreman of wreckers of the Washington Southern Railway, was taking a nap in the caboose attached to his wrecking outfit, while it stood at Fredericksburg, Virginia, when he received an order to hustle down the line to a point south of Wood's Lane, where a freight and an express had come together in a rear-ender.

When Franconia arrived at the wreck, he learned that fire had broken out immediately after the collision, that six oil-tank cars had burst open, and that the flames of the burning oil had set fire to the two express-cars at the head of the passenger-train and to about half of the cars of the freight-train.

"When you see tankers burnin'," said Franconia to his men, "light your pipes and sit down and take it easy."

He lighted his pipe and puffed away, his men doing likewise.

"There ain't nothing else to do," Franconia went on. "When you go up against burning oil, there ain't no use in trying to put out the blaze, 'cause you just can't do it."

The heat became so intense that Franconia and his gang were obliged to move farther from the fire.

When the oil had at last burned out, Franconia and his wreckers put the hose on the wreckage, cooled it off, and then began clearing away—dumping everything down an embankment.

Franconia saw one of his men toss down the embankment a chunk of metal mixed with earth. Then another chunk, and another. Other men joined the first one, and with desperate haste began tossing down still more.

Along came a farmer, who picked up one of the chunks, examined it for a moment, then started away with it.

"Hey, there!" called Franconia. "Put that stuff back where you found it!"

Worth While.

Franconia had noted that the lumps of metal had a peculiar shiny appearance. He tumbled down the embankment, picked up one lump, scrutinized it closely, then suddenly shouted up to the engineer of the locomotive pulling his wrecking outfit:

"Back down and bring up that empty coal-car!"

When the car was brought up to the wreck, Franconia gave this order to his gang:

"Come down here and pick up all these chunks you've been throwing away, and load em in that car."

The men, assuring one another in undertones that the foreman had suddenly gone crazy, proceeded to carry the chunks back up the embankment.

"Now," said Franconia to the engineer, when he had made sure that every last lump was loaded, "pull that car up to Washington."

"What fool job is this you're giving me?" asked the engineer. "What's the good of hauling that worthless stuff up to Washington?"

"A Treasury agent will meet you," said Franconia, ignoring the engineer's protest. "I'll wire up—and when you get to Washington the Treasury agent will do the rest."

"I know," said the engineer, after thinking a moment. "Those are chunks of silver."

"Right you are, my boy. Silver dollars and halves and quarters. There were chests of money in those express-cars, and the heat of the burning oil reduced 'em to scrap mixed with other metal and dirt."

It was true. The Treasury Department had shipped $180,000 in silver in one of the express-cars. The messenger was killed in the collision, so the wreckers were left in ignorance of the value of the cargo until Franconia made the discovery. The silver, having left Washington as money, was now returned, with Franconia's compliments, as bullion.

The Good Samaritan.

Mr. La Baume is to the Norfolk and Western what Mr. Richards is to the South-

ern Railway. He is the agricultural and industrial agent. He brings settlers to his territory, and then shows them how to make a crop grow where none grew before.

When the settlers get their houses built and their crops started, Mr. La Baume takes out special agricultural trains with expert lecturers, and helps the settlers some more. When a settler gets into trouble on the N. and W., Mr. La Baume personally hastens to the rescue.

'Twas the night before Christmas at the Roanoke headquarters of the Norfolk and Western. Not a railroad wheel was stirring except in the station clock. The reason no wheels were going round was because they didn't dare. The "Magic City" was shrouded in a fog so thick that locomotive drivers couldn't see an engine's length ahead.

"It's the limit," said General Passenger-Agent Bevill to Mr. La Baume, as the two groped around trying to find the gate leading into the grounds of the hotel opposite the N. and W. general offices.

"It's like London," answered Mr. La Baume. "If No. 16 gets in here to-night, she'll have to crawl in on her hands and knees. She's due now."

It was then midnight. A prolonged locomotive whistle was heard.

"It's 16 whistling in," said La Baume.

About a half-hour after the train was safe in the station, a man rushed into the Roanoke Hotel, found Mr. La Baume, and cried:

"Come down to the station. There's a woman there with eleven children. She lost her husband down the line, and wants the railroad to find him."

The Mother of Eleven.

Mr. La Baume found that the woman with eleven children was a Bohemian immigrant whose husband, Charles Krieger, had left the train at Bluefield, West Virginia, saying that he was going for something to eat. He did not return, and the train went on without him.

The missing husband had all the railroad tickets and baggage-checks, but the crew brought the mother and her eleven children on to Roanoke.

The chief train-despatcher wired to Bluefield asking if anything had been seen of a man named Charles Krieger. Hour after hour passed, and then, at four o'clock in the morning, came the answer saying that Krieger had been found—hanging by the neck to an apple-tree.

The mother of the eleven children was informed of the suicide, and all the rest of the night and all Christmas Day she remained in the station, waiting for the coming of the train bearing the body of her husband.

Every kindness was shown by the station men, who passed around a hat and collected a goodly sum for the widow.

Meantime, Mr. La Baume learned that the fatherless party was bound for the Bohemian colony at Estes, Virginia, which Mr. La Baume, by his own enterprise, had founded and furnished with settlers and watched grow up to a thriving town. No. 16 pulled in with the body of the suicide. Mr. La Baume took the train, with them and their dead, at midnight and proceeded to Petersburg, a five-hour ride, keeping him up all night.

At Petersburg he hired carriages and drove the party down to Estes, a seven-mile ride. There he turned the bereaved family over to friends, and the widow insisted upon kissing the hand of the railroad man who had befriended her.

Discipline His Hobby.

Charlie Griffin, the train-caller at the Terminal Station at Atlanta, was a stickler for discipline. He wouldn't break a rule made by Mr. Blount, the station-master—no, not for love nor money.

If he happened to see another man breaking one of Mr. Blount's rules, it hurt Griffin's conscience so much that he would proceed to act for and in behalf of the station-master by gently but firmly leading the rule-breaker back to a proper respect for Mr. Blount's measures.

Imagine Train-caller Griffin's indignation when, just after shouting notice of the departure of the "Five-twenty Dixie Flier for West Point, New Orleans, and all points south on Track No. 9!" he beheld a ticket-seller standing in the waiting-room with a long black breva clinched between his teeth.

"Don't you know it's against rules to smoke in this room?" cried the wrathful train-caller, showing teeth, Roosevelt style.

"Mind your own business," replied the ticket-seller.

Aghast at such defiance of the rules, the train-caller went to Mr. Blount and reported the heinous breach of discipline. The station-master promptly called the offender on the carpet.

"Wasn't smoking a little bit," he said. "My cigar was not lighted. And you, Griffin"—turning to the train-caller—"you lie!"

"Just for that," answered the train-caller in suppressed anger, his face lurid with the Harvard colors, "I'll punch you so you'll look like you've been through a thrashing-machine. I'll do it the first time I catch you outside of this building."

"When you get up against me, Griffin, you'll find yourself merely the flea on the lion," said the other.

The next morning the two men met outside of the building, a whole block from the discipline of the station. The ticket-seller had for company a number of railroad men. The train-caller was alone.

"Well, here I am, Griffin!" cried the former. "Ready with that thrashing-machine?"

The Other Cheek.

To the amazement of the railroad man, what do you suppose happened then? The train-caller, instead of closing in on his opponent, merely smiled, took off his cap, executed a Chesterfieldian bow, and said sweetly:

"Nothing doing, gents."

"Mollycoddle!" muttered the ticket-seller.

"Go as far as you like," answered the train-caller. "You can't get a rise out of me." He passed on, with his head high.

"Well, don't that beat all!" said one of the railroad men. "Here we were lookin' for that train-caller to show us some stunts. Instead, he's all serene, and announcing nothing doing in the way of a scrap."

It was indeed a mystery, a whole seven-day mystery, during which time the train-caller persisted in turning the other cheek to the ticket-seller every time they met on each of those seven days. What on earth had happened to the train-caller, who, before that, had always shown pugnacious tendencies, but who now meekly suffered all the slings and arrows that the men flung at him from day to day for seven days?

On the eighth day, however, the secret leaked out. It was found that, on the very evening on which Griffin had found the ticket-seller smoking in the waiting-room, he stopped in at the Railroad Y. M. C. A., walked into the secretary's office, and said:

"Mr. Secretary, I heard a lecture in these rooms some time ago in which the lecturer

HE LET OUT THAT LONG-DELAYED PUNCH.

told that yarn about turning the other cheek. Now, my conscience is troubling me a whole lot, and I want your advice. I have promised to punch a certain fresh party to-morrow morning, and what I want to know is—shall I or sha'n't I?"

Not the Story's End.

The horror-stricken secretary promptly told the train-caller all about the wickedness of fighting. The result of the lecture was that Charlie Griffin did turn the other cheek.

A novelist would end the tale here; but I, as a railroad reporter, am compelled to state that on the day after the secret of his humility had leaked out, the train-caller caught the ticket-seller in the waiting-room again with a cigar in his mouth. This time, without further ado, he let out that long-delayed punch and sent the ticket-seller to the floor.

Blount sprang forward to referee the duel. He counted ten, and still the man lay helpless.

"Mr. Blount," said the train-caller, "does he look as if he'd had enough?"

Winning a Lawsuit.

Yardmaster Joe Eager, of the Louisville and Nashville Railroad, at Paris, Tennessee, sat in his office reading a newspaper, when suddenly he muttered:

"Hanged if I don't think I can win this lawsuit for the railroad!"

He was alone in his office, and no one was within hearing; but, all the same, he pounded his fist on his desk and said:

"Say, I'm jiggered if I don't win this suit for the company. I'll take out an engine and make the test. If the engineer can stop in time, we lose; if he can't stop in time, we win."

Joe Eager went over to an office labeled "Attorneys-at-law," and there had a long talk with two men.

That same night a locomotive pulled out of the roundhouse at Paris and backed down the track a piece, where a caboose was coupled on.

In the cab was Engineer Bill Murray and a fireman. In the caboose was Conductor Chad Petty, Joe Eager, and two men in long black coats who were not railroad men.

The little train sped along to a place just south of McKenzie.

Eager jumped off and called to the engineer:

"All right, Murray! Back up a quarter of a mile so as to return past this spot at full speed."

The little train backed away, and the yardmaster did what will seem a queer thing for a railroad man to do. He lay down beside the track with a leg across one of the ribbons of steel.

There was no moon that night, but the engine's headlight was the brightest the road owned. The engine, having backed up a quarter of a mile, now came swooping toward the spot where the yardmaster lay, the engineer blowing his whistle the moment he caught sight of the man on the track, then reversing and making every attempt to stop his train before reaching the man—but all in vain.

The yardmaster, as the train drew near, jumped up and scampered to a safe distance from the track—and the train flew past.

"That'll do!" cried Eager, as the train came back to pick him up. "This test shows me that I'll win that suit for the L. and N., and don't you forget it."

He jumped aboard the caboose, and the train returned to Paris.

The next day those who had gone out with the engine and caboose the night before, including the two men in black coats, appeared at the court-house, where the case of Mose Lucas *vs.* The Louisville and Nashville Railroad was to come up for trial.

The lawyers representing the plaintiff stated their case. They said that Lucas had lost his leg by being run over by a train of the Louisville and Nashville Railroad near McKenzie, Tennessee, and wanted one thousand dollars damages.

The Lawyer Speaks.

Then up rose one of the men in black coats who had gone down to the spot near McKenzie the night before. As one of the attorneys for the railroad, he addressed the court thus:

"Your honor and gentlemen of the jury: Paris, Tennessee, in which this court sits, is the division-end of the Memphis-Paris run of the railroad whose cause, as defendant in this suit, I now have the honor to plead. In charge of the yards here is a yardmaster who, from the first, believed that the plaintiff was run over through no fault of Engineer Murray, who was at the throttle of the train which ran over the plaintiff. The yardmaster to whom I refer is Joseph Eager, whom I beg leave now to call as a witness."

The yardmaster came to the stand, and the attorney for the railroad said:

"Last night you took an engine down to the spot near McKenzie where the plaintiff was run over, did you not?"

"Yes, sir."

"The headlight of that engine was the most powerful the railroad company possesses, was it not?"

"Yes, sir."

"That engine was run by William Murray, who was at the throttle when his train ran over the plaintiff, was he not? And in the caboose behind the engine, last night, was Chadwick Petty, the conductor in charge of the train that ran over the plaintiff?"

"Yes, sir."

"You, Mr. Yardmaster, lay down on the track in about the position in which the plaintiff lay when struck, did you not? And the engine then came down the track, and the moment the engineer saw you he tried to stop the train, but could not—is that not so?"

"Yes, sir."

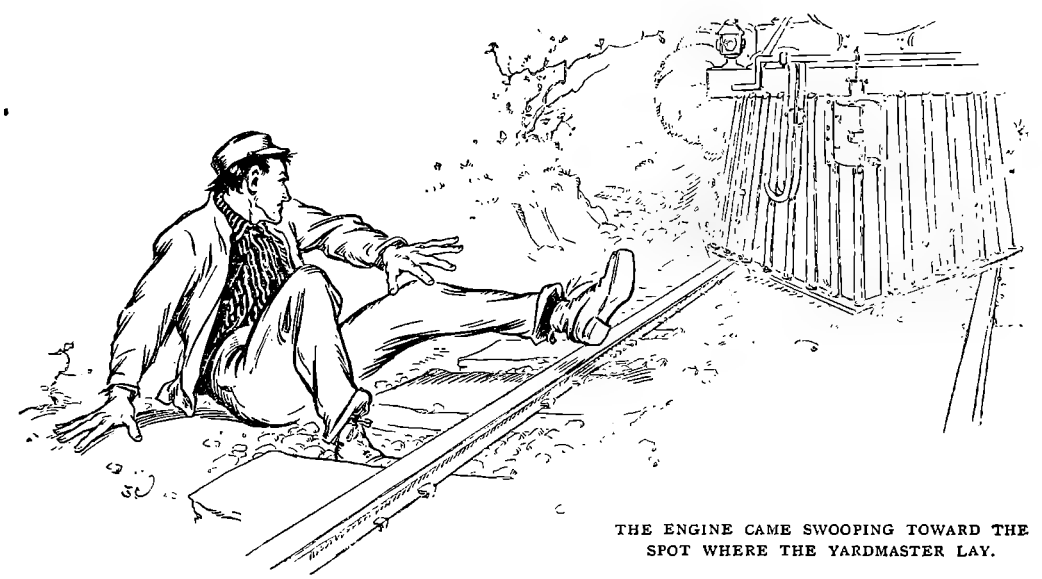
"Well, then, your honor and gentlemen of the jury, since it has been proven that the engineer could not stop his train before running over the plaintiff; and as the plaintiff was lying where he had no business to be lying; and as, moreover, the plaintiff was drunk at the time of the accident—I now ask that this case be quashed without taking up any more of the time of this court."

Instead of quashing the case, however, the judge gave it to the jury—a backwoods' jury—which filed out, was gone about five minutes, then returned and gave a verdict for the plaintiff, stating that he was entitled to the damages claimed.

The result was that the L. and N. had to pay Mose Lucas a thousand dollars.

Two weeks later, Joe Eager met Engineer Bill Murray and Conductor Chad Petty when those two pulled in on their train from Memphis. Said the yardmaster:

"I'll be hanged if ever I try again to win a lawsuit for any railroad company. Know what I got for all my trouble? Got a reprimand to-day from headquarters for takin' out an engine without orders!"



THE ENGINE CAME SWOOPING TOWARD THE SPOT WHERE THE YARDMASTER LAY.

Ten Dollars for His Heroism.

Conductor Lige Combs of the Coal and Coke Railway, with a run through West Virginia, is living proof that all the heroes among railroad men are not on the trunk lines.

Combs's road is only one hundred and seventy miles long, connecting the West Virginia towns of Charleston and Elkins.

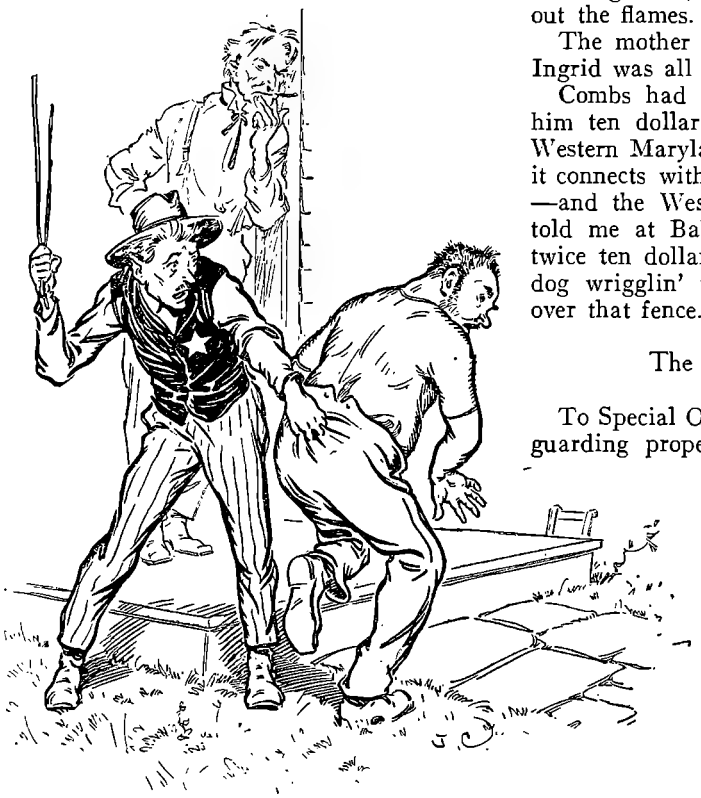
Here is a new feat in child-saving performed in a new way, by Conductor Combs.

Lige was very fond of children. He admired particularly the little daughter of one of the section-hands on his run who lived in the section-house just out of Leiter, not far from Roaring Creek.

The section-man's name was Exeline, and

his five-year-old daughter's name was Ingrid Exeline. Combs had often seen the little girl, and he pronounced her the sweetest little thing on his run.

One day last January, Combs's train pulled



DARNALL ACTUALLY DID AS THE COURT ORDERED.

away from Leiter on its way to Roaring Creek, and presently approached the section-house where little Ingrid lived.

Looking toward the house in hope of catching a glimpse of his little favorite, Combs saw her standing in the door of the section-house with her dress on fire.

The flames were threatening to envelop her, and Combs heard her screaming in agony.

He pulled the cord signaling the engineer to stop. But he could not wait for the train to come to a standstill. The child would be burned to death before he could get to her.

Not another soul was anywhere in sight to run to the little girl's aid; and, although the train was in motion, Combs rushed to the steps of a car and jumped.

He rushed up to the section-house, only to be met by a dog that made for him. Combs kicked the dog, but Fido came back at him, madder than ever. Combs seized the animal by the back of the neck and threw him over a fence.

On he rushed to where the child stood. Off came Combs's uniform-coat, and around the little Ingrid he threw it, then rolled her on the ground, and with his bare hands beat out the flames.

The mother was absent at the time, and Ingrid was all alone at the section-house.

Combs had to buy a new coat. It cost him ten dollars. He told the boys of the Western Maryland Railroad at Elkins where it connects with the Coal and Coke Railway —and the Western Maryland boys in turn told me at Baltimore—that "it was worth twice ten dollars just to see that pestiferous dog wrigglin' through the air while going over that fence."

The Song of the Lash.

To Special Officer Darnall fell the duty of guarding property and preserving peace at the railroad station at Melville, Louisiana, about a hundred miles out of New Orleans, the station being used jointly by the two roads entering the town: the Texas and Pacific and the Opelousas, Gulf and Northeastern.

For months Darnall had worked overtime arresting pesky hoboes who committed depredations on the right-of-way of which he was the guardian. Finally he began offering up a daily prayer that some one would invent, devise, or conceive some form of punishment for the act of hoboism that would cause tramps to avoid Melville, Louisiana. One day his prayer was answered.

It was on a Sunday in February last. Darnall, soon after reporting at the railroad station for duty, saw smoke issuing from a box car a little way up the track.

"Another human varmint," he opined, and he girded up his loins and proceeded to stalk the game.

Suddenly looming up at the door of the box car and peering in, Darnall saw a bo sitting by a fire—a blazing pile on the wooden floor. Pointing his big gun at the man, he said:

"Kick out that fire and come with me!"

Half an hour later the special officer arrived at the mayor's house with his prisoner.

"This one is the worst I've found yet, your honor," said Darnall. "He was usin' the wood floor of a box car for a hearth. Can't you think up some new kind of punishment for him, your honor?—some powerful sight harder punishment than you usually dish out?"

"What's your name?" the mayor asked.

"Will Williams."

"You're fined four dollars."

"Ain't got four dollars, judge."

"Then you'll have to work on the roads."

"No, no," said Darnall. "That ain't punishment enough, your honor."

"What, then, do you want me to do with him?" asked the mayor.

Just then, through the open windows of the mayor's house, came the cry from within the near-by wilderness of live-oaks:

"*Whip*-poor-will! *Whip*-poor-will!"

Hearing this cry of the bird of the air, the mayor's eyes took an inspired expression. He meditated, then said to the prisoner:

"Did you say your name was Will Williams?."

"Yes, sir."

Just then the cry from the oaks was repeated:

"Whip-poor-*will!* Whip-poor-*will!*"

"Hanged if that bird ain't right!" exclaimed the mayor. "I'll do it. Darnall, you'll take this Will Williams outside and whip him. Give him forty lashes on the back, under the laws of the State of Louisiana."

"No, no!" protested Darnall. "I ain't hankerin' for that job myself, sir. Call over the Texas and Pacific station-agent and let him do it. Or call over that freight-handler of the Opelousas, Gulf and Northeastern. They are huskies."

"No," insisted the mayor. "This crime was committed on the property of both the railroads. The car belonged to the Opelousas, Gulf and Northeastern, but it was standing on a track of the Texas-Pacific. Now, Darnall, you represent both roads, and I order you to administer forty lashes on this Will Williams."

Darnall actually did as the court ordered.

Next month Mr. Willets will tell you about a number of the daughters of the "Grand Army of the Rail south of the Potomac," under the heading: "Some Railroad Girls in the Dixie Camps."

RACE TO COME IN LAST.

Shasta Limited Crews Unable to Arrive Late Enough at Sidings to Avoid Throwing Switches.

UNDER a new trackage agreement, the Shasta Limited runs from Portland to Seattle, and part of the way, from Vancouver to Tacoma, on the Northern Pacific tracks.

In common with the Northern Pacific trains the limited on this section of its run is operated under what is known as the A B C block system. As it passes each station the engineer gets running orders to the next station, these being handed to him from a "clip" by the station-agent.

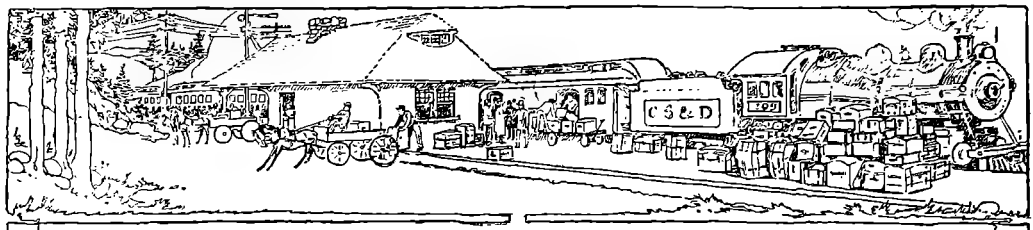
These orders often contain instructions to pass a certain Northern Pacific train at some siding, out in the country; and railroad etiquette demands that the crew of the trains first reaching a siding shall get out and throw the switches at either end, so that the second train will not have to stop. And if there is anything the average passenger brakeman hates, it is to get out, unlock and throw switches, pass his train along, throw the switch back again, and then chase up the track after the last car.

Between Portland and Tacoma the Shasta Limited is the crack train of the run. It has the fastest schedule, and it averages over thirty miles an hour for the entire trip. Northern Pacific crews have strict orders not to hold it up by being late at passing points; but the Northern Pacific engineers know their road thoroughly, and can calculate to a nicety the length of time it will take the Shasta train to run from point to point.

The result is that the Shasta Limited always reaches the sidings just a few seconds before the Northern Pacific trains, and the Shasta crew has to pile out, regardless of weather, and throw switches. As soon as this is done the Northern Pacific train looms in sight, rushes past on its clear track, and its engineer, conductor, and brakemen lean out of the cab and vestibules and wave laughing greetings at the Shasta men standing at the switches.

The engineers of the Oregon and Washington trains are doing their best to so time their arrival at passing points as to force the Northern Pacific men in first upon the sidings; but so far they have not succeeded. With only a minute of leeway at passing points it requires a thorough knowledge of the road and running conditions to "lay back" without losing time; and so the merry comedy has so far been all one-sided.

Oregon and Washington crews say they do not care so much about the other two trains, but they declare that they will yet solve the mystery, and get the Shasta Limited through without having to tumble out at every passing point and "get the laugh" from the Hill road crews.



THE RAILROAD EATING-SHACK.

BY BESSIE BARDSLEY.

Written for "The Railroad Man's Magazine."

TAKE me way back to Nevada, where beside the gleaming track,
Standing just next to the switch-head is the railroad eating-shack.
Where the foot-hills cut the sky-line on the west and on the east,
Where the sunset's gorgeous rainbow gives the eyes an evening feast.
While trailing down the canyon comes a sneaking little breeze
That cools your heated blood and brain and makes your fingers freeze!

I want to see the boys again, to know who's first out now,
I want to hear the roundhouse men start up a friendly row;
There's always something stirring there 'tween the hashers and the boss,
The "shade of the temple" Mormon boys and the prune-pickers up from Los.
I want to hear the same old joke—that everywhere else on the line
The towns are swell and the grub is good and the weather always fine.

Take me back to where the porter, "Hash-House Willie," beats the gong,
While the train stops and the tourists rush inside, a hungry throng—
I wouldn't mind the daily kicks 'bout the price of apple pie,
Or, "Beans, fifteen cents, and coffee, ten! It's robbery!" they cry.
"What State is this Nevada in?" I can hear some one ask,
And, "How soon do you think you'll own this joint? How long do you think you'll last?"

Take me back to where the best double-discounts all the worst,
Where the West is wild and woolly, as it used to be at first.
'Mid the sage-brush in Nevada where the foot-hills guard the track,
Where the Indian builds his wigwam near the railroad eating-shack.

WITHOUT LIGHTS.

BY J. AUBREY TYSON.

A Woman Wages a Battle, Which Is Usually the End of All Things.

CHAPTER XIX.

A Woman's Battle.

ERSKINE, who had already risen, regarded the young woman with an expression of bewilderment. McGrane's astonishment held him to his seat. Miss Warrington, raising higher the veil that had partly concealed her features, turned to the Irishman.

"You may leave us," she said curtly. "I should like a few words, however, with you, Mr. Erskine."

McGrane rose like a man in a dream, removed his hat, and left the room. He had scarcely closed the door behind him, however, when it was opened by the porter of the car, who asked whether the ladies wished to have their berths made up for the night.

Louise shook her head. "No, we shall not require them," she answered.

The porter went out, and when the door was closed again Louise, laying a hand on her mother's arm, led her to the seat that had just been vacated by McGrane. On this the two women sat down together. Mrs. Warrington, sobbing quietly, hid her face in her handkerchief.

"Sit down, Mr. Erskine," said Louise.

The young man did so. Louise surveyed him thoughtfully. At length, breaking the silence, she said:

"Mr. Erskine, I have taken your advice."

The young man nodded. "Indeed!" he exclaimed quietly.

"Yes. I have telegraphed to my father, asking him whether anything serious has happened to my brother Joseph."

The young man flushed slightly, then grew more pale as he regarded her inquiringly. With nervous fingers Louise opened the chatelaine bag she carried, and from it she drew out a yellow telegraph-form.

"This is the reply to my message," went on Louise, as she held the paper toward him.

Erskine, leaning forward, took the message from her extended hand, and glanced it over quickly. It was addressed to Miss Warrington at Bernardville, and read as follows:

> Joe disappeared two days ago. If you cannot persuade him to return at once his disgrace is inevitable. All who have chosen path other than mine, must follow it. Expect no further communication from me.
>
> FATHER.

After carefully reading the message, he held the paper toward her. She took it nervously.

"You see, it is about what I told you I expected to receive," she said weakly.

Erskine looked at her more sharply. Her manifest nervousness and the unsteadiness of her voice plainly indicated that something had weakened the proud, uncompromising spirit that had dominated her before.

"You think the message was designed for the purpose of causing you to return at once to Chicago?" he asked gravely.

"Yes."

Erskine rose deliberately. "Then I have nothing more to say," he answered with a bow of resignation.

"Stop!" the young woman exclaimed impatiently. "You are wrong. There is something more to say."

Fred resumed his seat and dropped his hat beside him. From without there came several sharp shrieks of a locomotive whistle, followed almost immediately by a low, rumbling sound. The Cascade flier was getting under way!

Began in the March Railroad Man's Magazine. Single copies, 10 cents.

Grasping the arm of her seat, Louise Warrington leaned back and surveyed narrowly the young man who sat facing her.

"You still expect me to believe that terrible story you told me several hours ago?" she asked.

"All I told you was the truth, Miss Warrington," Erskine answered quietly.

"Had it been true, don't you think my father would have spoken of it—in this?" she asked, slightly raising the telegram she held.

Gazing at the floor, Erskine frowned thoughtfully. "It is just possible that your father does not know," he said.

An expression of incredulity settled on the features of Louise. "He does not know?" she murmured.

"It is possible that he does not," said Erskine, and as he spoke he shifted his gaze to the sobbing mother, who, sitting beside the window, still was holding a handkerchief to her face.

"You have told me that you saw the crime committed," the young woman went on. "If this were true, did you not report the fact to my father—or the police?"

"No. I made no report of the matter to any one. My reason for failing to do this was that I feared that McGrane and I might be detained as witnesses at a time when it was essential we should be elsewhere than in Chicago."

"You knew at that time that I purposed leaving Chicago?"

"No. I have told you that I knew nothing of your purpose in leaving Chicago until I saw you on the train at Wapiti Falls."

"True—true—I remember now," sighed the young woman wearily. "You told me you were seeking—seeking some one else."

"Yes."

"At the time you saw the crime committed, did you know that the man you are seeking now had any intention of coming West?"

"Yes."

"Did you have any reason to suspect the nature of his object in coming out here?"

The face of Erskine grew whiter as he continued to regard his fair interrogator. Was she honest in thus inviting his confidence, or was she working in the interest of Montresor? For a moment he hesitated; then, giving her the benefit of the doubt, he spoke.

"Yes," he answered slowly. "I knew that Montresor was about to start for the State of Washington for the purpose of obtaining possession of stolen property."

Louise started violently, and as with a little cry she leaned toward him, she clutched the arm of her seat.

"You mean—you mean—you know!" she gasped.

"It was because I knew this that I left the body of your brother on the lake shore in Chicago," Erskine replied. "For the dead I could do nothing more, but for the living there was much to do, and I came West to do it. Immediately after the commission of the crime, the murderer and his companions escaped in a boat. If it is true that the body has not been found, it probably is due to the fact that the murderers succeeded in carrying out their original plan, and, returning to the shore, carried the body out into the lake."

Trembling violently, and almost on the verge of collapse, Louise sank slowly back into her seat, and regarded Erskine with dilated eyes. Her weeping mother appeared to have heard nothing that had been said.

"What was this stolen property of which you speak?" the young woman demanded faintly, after a pause.

And now it was Erskine's turn to hesitate. Louise watched him with an expression in which curiosity and fear were blended.

"It consisted of certain bonds which it was in the interest of your brother to have returned to the place from which they were taken," the Altoona man explained, half-reluctantly.

With a little gasp, Louise Warrington bowed her head and hid her face in her hands. Erskine's face was clearing now. There still was much in connection with the young woman's relations with the affair that baffled him, but he was gradually coming to believe that, in some manner or other, she had been moving in the dark.

Straightening herself suddenly, Louise removed her hands from her face and darted a quick, searching look toward Erskine.

"And it was to try to recover those bonds, and not to spy upon my movements, that you left Chicago?" she asked.

"The recovery of those bonds constitutes my only object in coming West. Had I intended to spy upon your movements, I would have followed you when you left the train at Bernardville."

"You saw me leave the train?"

"Yes. McGrane saw you also, and it was all I could do to prevent him from following you. His intention was not to spy upon you, however, but to save you from the possible influence of the man who had killed your brother."

"And you were willing that I—" the young woman began, and stopped.

Had the situation not been so serious, Erskine would have smiled at the sudden manifestation of feminine unreason. But it was grimly enough that he answered:

"My interest in you was secondary to the purpose of my mission. I was not in a position to allow anything to divert me from my search for the bonds—and Montresor."

Leaning toward him, Louise laid a hand on his knee. "And you think—think that you will be able to get the bonds—before they get into his hands again?" she asked him breathlessly.

"Yes," he answered curtly.

"But how?"

Her voice was piteous, and he was looking into a pair of beautiful, pleading eyes. For a moment his blood was tingling, and his secret trembled on his lips, but in a quiet, calm voice he said:

"I shall succeed, Miss Warrington. That is all I can tell you now."

"But is it not possible that I can help you?"

"I shall need no help."

A stricken look entered the young woman's eyes. "You—you do not trust me!" she exclaimed.

And Erskine answered: "No."

With a little cry, Louise shrank from him, and once more leaned back in her seat and hid her face in her hands. In the attitude of this comparative stranger was a degree of self-mastery that she never had encountered in another man before. Even her father, at times when he was most severe, never had ventured to charge her with duplicity.

A flush of shame colored her cheeks; then, lowering her hands from her face, she turned upon the young man a pair of eyes that were agleam with anger.

She pointed to the door.

"Go!" she commanded in a low, hoarse voice. "It is only to my father that I will take that confidence which I was about to repose in you."

But Erskine, disregarding her command, continued to study the angry woman's face. As Louise looked into the young man's eyes she seemed to quail.

"Well—why do you not go?" she asked breathlessly. "If you will not believe in me, why do you not go?"

The anger that had been blazing in her eyes now gave place to an expression of reproachful inquiry.

"I am trying to believe in you, Miss Warrington," said Erskine huskily. "But you forget that when—"

He stopped. To the ears of both of them came the sound of a locomotive-whistle, and they knew that the West Coast Express was beginning to move in the direction that had been taken by the Cascade flier.

"But if I tell you—"

There came a sudden thump at the stateroom door, then the knob turned quickly, and the door flew open. Into the room rushed a white-faced man, with wildly gleaming eyes. In a moment he had closed the door behind him.

"Miss Warrington—" he began in shaking accents.

But he said no more. His gaze had fallen on the man who was seated opposite the young woman to whom he had spoken. He stiffened suddenly, and recoiled aghast.

Erskine, rising, faced Montresor!

CHAPTER XX.

The Hour of Destiny.

TREMBLING, and leaning against the door, Montresor was the first to speak.

"You!" he gasped, looking at Erskine, with dilated eyes.

"Yes," Erskine answered calmly. "I think we have met before."

Slowly the Englishman shifted his gaze to the face of Louise, who, with a little cry, had half risen from her seat. Her face was pale and cold, but in her eyes was gleaming a light that chilled his blood and caused him to quail before her.

For a moment the man, half dazed, seemed to be on the point of attempting to retreat. He quickly altered his purpose, however, and, reaching behind him, shifted the catch that locked the door.

"I want to speak with you, alone," he said doggedly, to Louise.

"I am under the protection of Mr. Erskine, sir, and will hear nothing from you that may not be said in his presence," the young woman answered in a voice that shook a little.

Montresor, hesitating, darted a malignant glance in Erskine's direction, then allowed his gaze to fall to the floor.

"What is it you wish to say to me?" asked Louise coldly.

"One of your father's agents has traced us to this train," the Englishman replied, speaking with difficulty. "If he finds me, he will place me under arrest. If he does

this it will be impossible for me to keep the promise that I made to you."

Erskine turned to Louise. "What was the nature of that promise, Miss Warrington?" he asked quietly.

"He promised to return to me, in Tacoma, certain bonds, on condition that I became his wife," she murmured.

Erskine nodded grimly. "He has made a promise he cannot keep," he said. "More than this, he has just told you something which I believe to be untrue. I think I am safe in saying that Mr. Warrington has authorized no one to place Mr. Montresor under arrest."

A gleam of hope suddenly lighted the face of the Englishman. "Is not Glen Streyer an agent of Mr. Warrington's?" he demanded eagerly.

And now it was Erskine's turn to start. He remembered that the general manager had told him that Glen Streyer, one of the most efficient detectives in the United States, was working in the interest of Stanwood, the treasurer of the company, and that, at all hazards, the missing bonds must be kept out of his hands.

If Streyer obtained the bonds the complicity of Joseph Warrington in the theft would be established, and the end of Andrew Warrington's career as a railway official would be inevitable. There was a faint expression of anxiety on Erskine's face, therefore, as he asked:

"Is Glen Streyer on this train?"

"Yes—yes, he boarded it at Tyrcone," Montresor faltered.

Once more the Altoona man's heart was in his throat. If Streyer had boarded the train at Tyrcone, he doubtless had learned of the hold-up of the Cascade flier, and that a typewriter box had been taken from the Dale Express car. Was it not probable that, before leaving Chicago, the detective had a clue that had caused him to follow this box, rather than Montresor?

From the duty-bound engineer, or the fireman, he might have learned that the men who had held up the Cascade Limited flier had left the train at Tyrcone. In that event it would be easy for him to infer that the fugitives had planned to take the West Coast Express at that point. Was it not more likely that he was after the men whom he believed to have the box in their possession, than that he should have been diverted from his quest by the pursuit of Montresor?

Now, it seemed to Erskine that it was himself, rather than Montresor, who had most to fear from this redoubtable detective who had boarded the train. In the stateroom in which he now was standing were the suitcases containing the prize he had struggled so determinedly to win.

Whether Glen Streyer sought him or Montresor, the result was likely to be the same. Montresor's trail and his led to the stateroom in which now sat the sister of Joseph Warrington, the man who was suspected of having taken the missing bonds from the place in which they belonged. And within two feet of where Louise Warrington was sitting were the missing bonds themselves.

Appreciating the danger to which he would be exposed by traveling with the bonds, Montresor had sent them by express. And now Montresor, Miss Warrington, and the bonds were in a small room together, with the cleverest detective in the United States almost at the very door!

In Erskine's mind there was little doubt that the detective had been on the flier at the time it was held up, on the other side of the Dumbbell. Montresor had alighted at Tyrcone, and he probably was in a position to tell whether or not the story of the robbery of the express-car had reached the ears of the other passengers, or those of the men employed in and around the station. But Erskine dared not ask the question.

"What is it, then, that you have come here to ask of Miss Warrington?" Erskine asked, at length.

"To conceal me here until I shall be able to leave the train," replied the desperate man.

"No—no!" gasped Louise, rising.

"But—by Heaven—I'll stay!" the Englishman muttered fiercely.

And, as he spoke, Erskine saw the glint of a revolver in his hand.

In a flash the Altoona man had thrown himself upon the unwelcome intruder. To and fro the strong men swayed, but the unnerved fugitive soon yielded to Erskine's superior strength. After wrenching the revolver from the hand of his adversary, Erskine forced him to his knees.

The struggle ceased. The shriek of fear that had issued from the lips of Mrs. Warrington had been smothered by the hand which her daughter continued to hold over her mouth.

Erskine, white-faced and grim, leaned lower over his adversary.

"Well, Montresor—are you done?" he muttered.

The Englishman struggled weakly, then

his chin sank upon his breast. For a moment the two men were motionless. Erskine, with his gaze resting on the bowed head of the kneeling man, was thinking quickly. Louise and her mother were watching both of them, with horror-stricken eyes.

"And now there is nothing to prevent me from delivering you into the custody of Streyer," Erskine said; then, after a pause, he added: "But if you will do one thing I will give you one more chance to run for it, and I will not follow you."

Montresor looke up surlily. Erskine went on:

"Yes, I will let you go, if, in the presence of these ladies, you tell me what you did with the body of Joseph Warrington—after you killed him."

Still grasping the wrists of the beaten man, Erskine felt him shudder. An expression of great fear settled on his face, and he seemed to be on the verge of collapse.

"Speak!" Erskine commanded roughly. "Which is it to be—confession or arrest?"

"If I tell you, you will keep your word—you will let me go?"

"Yes."

A long pause followed, then Montresor said weakly: "After you were gone, we took it—took the body in a boat, and sank it about two hundred feet outside the breakwater."

Fred glanced toward Louise, who, with an arm around her mother, was looking at him with wide, horrified eyes.

"Near what part of the breakwater?" Erskine asked.

"The left side—going out," replied Montresor.

"Who was with you?"

The eyes of the vanquished man flashed angrily. "I have told you all I promised to tell," he said hoarsely. "You gave me your word that if I told you where we put the body, you would let me go."

Erskine nodded, and drew back. "Go, then," he said.

Montresor rose weakly to his feet. "You will not follow me?" he asked.

"No. I will not cause you to be followed until to-morrow. Clear out."

The Englishman's trembling fingers fumbled with the lock and knob, then the door opened and he passed out stealthily. Scarcely had the door closed behind him, when, with a little despairing cry, Mrs. Warrington fell swooning to the seat from which she had risen. To the elder woman's condition, however, the daughter gave no heed. With a look of bewilderment on her features, she stepped to Erskine and laid a hand on one of his arms.

"Why did you do this?" she asked him breathlessly. "Why did you let him go?"

Half unconsciously, he took her hand in both of his. "I let him go because it must not be known that he was with us in this room," he said. "I let him go because the bonds we have been seeking are there, and Streyer must not find them."

And, as he spoke, he nodded toward where his two suit-cases stood where he had placed them on the floor. The expression of bewilderment on the features of Louise grew deeper. Following the direction of his glance, she gave a little start. For the first time since she had returned to the stateroom she saw the cases of which he had spoken.

She turned to him again. "You—you mean that you have found them—the bonds that—"

"Yes, Miss Warrington, I have found them."

She looked at him incredulously at first, then the light of a great happiness overspread her face. A moment later she was in tears, and, swaying slightly, she turned from him.

Erskine was about to speak when, from outside the stateroom door, came the sound of a loud, hoarse cry, which was immediately followed by a revolver-shot. Into one of the pockets of his coat he had dropped the revolver he had taken from Montresor, and his fingers now closed around this as he glanced in the direction of the door. For several moments all was still, then a second shot rang in Erskine's ears, and there suddenly flashed across his mind the thought that the voice was that of Barney McGrane!

Quickly disengaging himself from the grasp of the now terrified Louise, the young man rushed to the door and threw it open. The odor of gunpowder entered his nostrils, and from the car came the half-smothered exclamations of the startled occupants of the curtained berths.

Moving forward cautiously, Erskine came at last to the vestibule. There, on one of the platforms, he saw the prostrate figure of a man—motionless and with up-turned face—a face he never had looked upon before! Blood was flowing from a wound in the middle of the forehead, and, as he looked, Erskine knew the man was dead.

"Who is he?" whispered a masculine voice behind him.

Erskine shook his head. But he believed he knew. Deeper and deeper into his mind sank the consciousness of the fact that the

lifeless form at his feet was none other than the body of Glen Streyer, the famous Chicago detective!

But Erskine and the passengers who were now crowding in behind him had little time to meditate upon the identity of the man who lay before them. All were startled by the sound of a second shot which came to them from the rear of the last car—another sleeper—on the train.

As those around him shrank back, Erskine pressed forward. Hurrying into the rear car, he ran along the aisle. Once or twice he came into collision with persons who, in the act of rising, had allowed their heads or feet to protrude from the sides of their berths, but he did not stop.

At last, gripping his revolver, he came to the rear platform of the car. It was empty, and the train was speeding at what he judged to be a rate of fifty miles an hour.

For only a moment did the Altoona man hesitate. A glance showed him that one of the side doors was open. This was sufficient to tell the tale, and, with outstretched hand, he glanced up toward the bell-cord.

This was vibrating in a manner that plainly showed that another hand was jerking at it furiously. The locomotive whistled, there was a hissing of air-pipes and a succession of jolts, and the train slowed down.

In the little party that accompanied the conductor and a brakeman, who jogged back along the track, was Erskine. He made no attempt, however, to outdistance his companions, for he reasoned that, under the circumstances, it would be unwise for him to expose himself to the view of a dying man.

But by and by the conductor halted suddenly, and the lanterns they carried hung ominously over something they had found beside the track. Advancing cautiously, Erskine saw two human figures lying together. They were men, and one, moving weakly, seemed to be trying to tighten his grip on the collar of the other.

In the man who moved Erskine recognized his friend, the Irishman. The man whose twisted neck indicated that he would never move again of his own volition was Montresor.

"He done it," the Irishman was saying weakly. "He snatched a derringer from his pocket and shot the other feller what told him he was wanted. It ain't the first man he killed, neither, for—"

As the conductor bent lower over the speaker, the Irishman, coughing violently, made a vain attempt to rise. Erskine, moving closer, saw that his lips and chin were flecked with blood.

"He's dead, ain't he?" McGrane asked eagerly, turning to the corpse that lay beside him.

"Yes, he's dead," the conductor answered gravely.

The Irishman was about to speak again, when, seeing Erskine, he motioned to him to draw nearer.

"Is everything all right, sir?" he asked, as the Altoona man knelt down beside him.

"All right, Barney—if we can get you out of this," Erskine replied in a shaking voice.

McGrane shook his head. "It's no use, sir," he said resignedly. "I told you 'tweren't no use in prayin' for the jumps to stop. They just kept comin' and a' comin' till they got me in the end. But Miss—Miss Warrington don't believe that me and you did that thing we was a talkin' about, does she, sir?"

"No, Barney; the whole truth is known to her now. She understands."

"I knew she would. And now it looks as though there weren't no more for me to do or say."

"You must brace up, Barney, while we get you back to the car."

"'Tain't no use, sir—'tain't no use. I'm goin' somewheres faster than any car will take me. I ain't got no more use for cars, and yet—yet there's still one more jump a comin' to me. I'm takin' it now—just like Montresor did, and if I land where he has landed—begobs, we'll have another set-to—in the mornin'."

And though death touched then the stout heart that would beat no more, it left intact the last grim smile that had parted the lips of Barney McGrane.

CHAPTER XXI.

Completing the Task.

THREE days after the death of Montresor and McGrane, Frederick Erskine, crouching behind a large packing-case that was filled with pamphlets, glanced impatiently toward a skylight in the ceiling above him. Each minute found the glass growing darker.

The Altoona man was now in a storeroom in the building in which the general offices of the Chicago, St. Louis and Western Railway Company were located. Thither he had made his way, all unobserved, more than five hours before.

Beside him were a dark lantern and two packages, wrapped in brown paper, which

contained the bonds he had taken from his father's train. One of his thumbs, thrust into a pocket of his vest, touched a folded paper that lay within. The paper was a leaf torn from the Old Testament Book of Proverbs.

Many thoughts occupied the young man's mind as he crouched there alone. For two days he had traveled eastward with Louise and her mother; and, though all of them were moving solemnly in the shadow of a series of appalling tragedies, there had been moments when the young man was conscious of sensations that were more pleasurable than any he ever had experienced before. A beautiful young woman, looking to him as her protector, had given him a full measure of her confidence—a confidence that had annihilated all his darker doubts and fears.

It was a strange story that Louise had told him, but he believed it all. It was at the home of one of the leaders of Chicago society that she had first met Charles Montresor, and it was explained to her that he was the son of a distinguished English nobleman.

Despite his cleverness and other personal attractions, however, she had not been altogether favorably impressed by his manifest attempts to win her favor. It was not until he became a close companion of her brother that she began to think better of him.

It was from Montresor, who posed as a man of wealth, that she first had learned that her brother was in serious trouble. Prior to this Montresor had twice proposed marriage to her, but each time she had told him that she found it impossible to reciprocate his affection.

When, however, he told her that her brother, whom she loved more than any one else in all the world, was suspected of adding crime to his long list of indiscretions, she, flinging her own discretion to the winds, had gone to Mr. Stanwood, the treasurer of the company, and one of the enemies of her father, for corroboration of the story. Stanwood, pitying her distress, had told her only that certain bonds were missing from the office in which her brother was employed.

He had assured her, however, that Joseph still was above suspicion. But Louise was not to be deceived. Suspecting that the situation was more serious than Stanwood had represented it to be, she guardedly questioned her father concerning the missing bonds. This had been the general manager's ground for suspecting that she had obtained the information from her brother's friend, Montresor.

Andrew Warrington, as the result of careful inquiries concerning the young Englishman, had learned that, for some strange reason, he seemed to have no fixed place of habitation, and that he practically had been disowned by his English relatives. More than this, he was reputed to be a card sharp, and no longer found himself a welcome guest at the Chicago clubs which he had been wont to frequent.

Accordingly, the old man had directed his daughter to cut him from her list of acquaintances. This she would have been quite willing to do had it not been for the fact that she had begun to depend on Montresor to aid her in an attempt to shield Joseph from the disaster he had invited.

Her mother, who idolized her son, was Louise's only confidante. Knowing the intolerance of her father for all forms of dishonesty, she dared not reveal to him the nature of her trouble. Such a revelation, she feared, would result in the young man being permanently ostracized from his family, and in the end disinherited.

The bonds of affection between Mrs. Warrington and her children were so strong that neither the mother nor daughter, by letting Joseph know that he was suspected, invited his confidence in the matter. They had planned to save him without allowing him to become aware of the fact that he had exposed himself to the loss of their respect for him.

To this end they encouraged his friendship for Montresor, whom they believed to be acting in good faith as their representative in their efforts to have the bonds restored to the place from which they had been taken. At length Montresor had told Louise that he had obtained a clue to the missing bonds, and he offered to buy them for her through one of his agents in Tacoma.

Overwhelmed by this evidence of the young Englishman's affection for her, Louise had promised that if he should do this she would become his wife. In the meantime Montresor had told the mother and daughter that agents of Andrew Warrington had begun to shadow him night and day, and that also, as a friend of her brother's, he had fallen under suspicion so far as complicity in the theft of the bonds was concerned.

And so it had come to pass that when Erskine was introduced to her she had believed him to be nothing more than a detective hired by her father to spy on her movements and to make trouble for Montresor. She had seen the photograph of the English-

man given by her father to Erskine, and, fearing lest Montresor's arrest would prevent him from setting out for Tacoma on the morrow, she had called him up on the telephone and had informed him of what had taken place.

He had sent to her the cab in which she and the unsuspecting Erskine had left the Warrington house, and, in accordance with Montresor's instructions, had gone to Lincoln Park, where, it was understood, the photograph by which Montresor was to be identified was to be taken from the man to whom Andrew Warrington had given it.

How Montresor came to be in possession of the stolen bonds Louise did not know. She had a theory, however, and Erskine was inclined to accept it. Montresor, disowned by his family, was nothing more than a mere fortune-seeker. Louise Warrington was not only one of the most beautiful women in Chicago society, but her father was reputed to be a millionaire.

Attracted, therefore, no less by her financial prospects than by her personal qualities, the dashing young soldier of fortune was determined to make her his wife. To this end he succeeded in getting her brother in his power.

Whether the bonds were taken on Joseph's initiative, or as a result of the influence which Montresor exercised over him, was a matter for speculation. One thing was certain, however, the bonds speedily found their way into Montresor's possession—probably as a result of the Englishman's promise to raise money on them secretly—a sum sufficient to enable Joseph to continue his reckless course of speculation.

Though it was certain that Montresor had at least two confederates, who were more or less informed concerning his relations with Joseph Warrington and the stolen bonds, these men, being involved in the murder of the son of Andrew Warrington, were scarcely likely to speak of the affair to any one. The lips of Montresor were sealed forever, but before his death he had succeeded in taking the life of Glen Streyer, the only man outside the conspiracy who had appeared to have learned the truth.

Barney McGrane, attracted by the sound of the shot that had killed Streyer, had started in pursuit of the Englishman, and had grappled with him until both had fallen from the train; and thus the only person who was informed concerning all of Erskine's movements on the night the Cascade flier was held up was also silenced.

The only persons who now were in possession of facts that were likely to result in serious trouble for Erskine, or a revelation of the taking of stolen property from the Dale Express-car, were the young man's father and the fireman. It was the course that was to be pursued by his own father that now gave Erskine the greatest concern.

At the time that the Cascade flier had stopped at Tyrcone, he had believed that his father's affection had triumphed over his sense of duty. It was Louise who undeceived him.

Louise had boarded the flier at Bernardville, and it was at her request that the conductor, who knew her and her mother to be the daughter and wife of the general manager of the C., S. L. and W., had directed the engineer to stop at Tyrcone, in order that she might again take possession of her stateroom on the West Coast Express, there being no unoccupied staterooms or berths on the flier.

In reflecting on the conduct of his father, the young man now realized that by representing that the first stop of the train would be at Weatherbee, the engineer had been trying to coerce his son into returning to the baggage-car the property which he had taken from it. The only comfort the young man found in his review of the adventure lay in the fact that his father appeared not to have reported that he had seen the unmasked faces of the men who had held up his train.

Neither did it appear that the fireman had spoken. The newspapers of nearly all the big cities in the United States printed accounts of the hold-up, however; but in view of the fact that only a typewriting machine appeared to have been taken, the theory was expressed that the hold-up had been the result of a wager.

While it was known that Montresor had killed Glen Streyer in order to escape arrest, the precise nature of the Englishman's offense remained a mystery. McGrane was reported to be the family coachman of the Warringtons, who was accompanying Mrs. Warrington on a trip they had been taking to the West, and who, upon seeing Streyer shot down, had sacrificed his life in an attempt to prevent the escape of the assassin.

In the presence of Louise and her mother, Erskine had compelled Montresor to confess that he had sunk the body of Joseph Warrington in Lake Michigan, just outside the breakwater at Chicago. While this confession had been sufficient to convince the two women that the Altoona man had spoken the

truth, circumstances proved that it was unnecessary, so far as the recovery of the murdered man's body was concerned.

At the time the confession was made, the waters of the lake already had given up their dead, and now the young man's body was in its tomb. The body of honest Barney McGrane, now on its way from the West, would be buried on the morrow.

Darker and darker grew the skylight under which the young man lay awaiting the hour which should witness the completion of the formidable task which, only six days before, he had undertaken.

Since his return to Chicago he had made no attempt to see or communicate with Andrew Warrington, and from Louise he had exacted a promise that until his work was done she would not reveal to her father the fact that she had met him in the West. She had kept that promise.

The afflicted father, knowing that Louise and her mother had been on the train from which Montresor had fallen with McGrane, doubted not that his daughter, accompanied by her mother, had gone West to wed the man against whom he had warned her. But, satisfied that all was over, he asked no questions. He had folded her in his arms; then he had led her to the room in which lay his murdered son.

It was after midnight when Erskine, rising from behind the box in the storeroom, stealthily began to make his way in the direction of the office in which the treasurer's big safe was located. Concealed under a desk in another apartment, he waited until the watchman made his hourly round, then he entered the treasurer's office.

Screened by a cloth which he had carried with him, he turned the light of his dark lantern on the lock of the vault-door. Then, carefully, but with a slightly shaking hand, he turned backward and forward the knob that controlled the indicator which pointed to the numerals and letter on the dial; and, as he worked, he seemed to hear the dying voice of Joseph Warrington repeating the figures and words.

The indicator had pointed to the numerals 2689, when Erskine paused and unfolded the page he had carried in the pocket of his vest, and, for the last time, he studied the last two verses of the fifth chapter of the Book of Proverbs; then, with the indicator, he spelled out the words on the little dial:

> His own iniquities shall take the wicked himself, and he shall be holden with the cords of his sins.
>
> He shall die without instruction; and in the greatness of his folly he shall go astray.

This done, he turned the indicator to the numerals 19047. With a rapidly beating heart, Erskine now attempted to draw toward him the great steel door of the vault. It moved.

CHAPTER XXII.

The Lost Bonds.

ON the morning of the day following Erskine's visit to the vault, Andrew Warrington, sitting alone in the library of his residence, was approached by his butler, who timidly informed him that a visitor had called to see him. The general manager, looking at the servant vacantly, failed to catch the name.

"Who is it?" he asked irritably.

"A man who says his name is Erskine, sir," the butler answered.

The general manager started slightly, frowned, and nervously tapped on the arms of his chair. After a moment's hesitation, he said surlily:

"Well, bring him in."

When the servant left the room, Andrew Warrington, leaning forward, hid his face in his hands. The whole world was dark to him now, and he felt that he sat alone with dishonor.

Scarcely had Fred Erskine left his office, on the week before, when the general manager realized that he had been guilty of an act of folly in asking him to undertake such a formidable quest. He had acted only on the inspiration of the moment, and had allowed himself to be too greatly influenced by the self-reliant aspect of this son of his old friend.

When Erskine's note had informed him that the young man had been attacked and overcome by the man whom he had been instructed to watch, he sent him another thousand dollars, but he had not the slightest hope that anything of a favorable nature would result from the quest. Since then, Erskine had seldom entered his thoughts.

Now, when the butler announced the name of the visitor, the broken-spirited old man resolved that he would take advantage of this opportunity to bid the young Altoona man to cease his efforts. Financial, as well as official, ruin stared him in the face, and he knew that his career was done.

So absorbed was he in painful reveries

that he did not hear the visitor enter the room. At length, however, a hand, falling on his shoulder, put his thoughts to flight, and as he turned his head he heard a voice.

"I'm sorry, Andy—sorry that you lost the lad."

And a moment later his hand was in the horny grasp of Sam Erskine, the old engineer.

"Oh, Sam, it's you!" Warrington exclaimed, rising and shaking the hand of his old friend.

"Yes, Andy," the other answered, with a sigh. "It's me, and I know this ain't a time for words. I ain't a goin' to stay long. I was in Chicago, and just dropped in. I knew you'd know how sorry I'd be when I heard you'd lost your boy. It wasn't necessary for me to come here to tell you that, but—but—"

The old man hesitated and looked thoughtfully toward one of the windows. "Sam," sighed Warrington, "you're looking old."

The engineer nodded. "Yes, Andy, and I'm feelin' older than I look. That's why I'm goin' to send in my resignation to-day."

The general manager looked at him sharply. "You're going to resign! No, no, Sam, it's not as bad as that, I hope. You are not so old that you are not good for many a long run yet."

"I'm out of the runnin' now, Andy—all out of it now," the old man replied in a choking voice.

Warrington laid a hand on the old man's arm.

"What's the trouble, Sam?" he asked, looking at the other anxiously.

"We've all got our troubles, old friend, I suppose," the engineer replied, then his voice broke, and sobbing like a child, he added: "But—but—God pity me, I've lost my boy!"

Warrington led him to a chair and urged him to sit down.

"You've lost your boy!" he repeated incredulously. "No, no, you must not tell me that."

"He's not dead, Andy—it is worse than that. Three nights ago, with a black mask on his face, he held up my train, just this side of the Dumbbell, out in Washington!"

The general manager, recoiling a step, looked at him with an expression of amazement.

"Three nights ago—out in Washington," he muttered.

"Yes."

"But why?"

"He told me when we recognized each other—"

"You are sure it was Fred?"

"Yes, Andy—it was Fred—my boy. He was with me for an hour."

Warrington's face grew livid. It was in the State of Washington that Montresor had come to his death. It was from Washington that Louise and her mother had just returned!

"But why—in God's name, why?" Warrington demanded impatiently, and, as he spoke perspiration began to gather on his forehead.

"He told me that what he took from the express-car was stolen property—that—that he was to return it to the rightful owner, but—"

"Did he get it—get away with it?" the general manager asked breathlessly, gripping the arm of the engineer.

Sam Erskine looked at him wonderingly.

"Yes," he said. "I run the signal of my conscience, and let him get away from me at Tyrcone. And that, Andy, is why I'll never lay my hand on a throttle again."

"Tyrcone!"

Andrew Warrington was trembling like a leaf in the wind. It was just beyond Tyrcone that Montresor had fallen from the train! Was it possible that, after all—

Once more the butler crossed the threshold, coughed slightly and approached his master. "Another Mr. Erskine, sir," the man explained, and, as he spoke, he held out a card.

The general manager took the card abstractedly. The words of the butler had failed to reach his ears. Then, suddenly, he became conscious of the fact that the name that was dancing before his eyes was "Mr. Frederick Erskine."

He turned his livid face to the butler, but he could not speak. He nodded, and the servant left him. Leaning on the top of a chair, he watched the door through which the servant left the room.

In a few moments Fred Erskine, walking quickly, appeared in the doorway. Something distracted the young man's attention and he turned and smilingly addressed some one in the hall.

With an exclamation of astonishment, the old engineer rose quickly and tottered forward. From the hall there came a little joyous cry, and immediately afterward, Louise, gowned in black, rushed to the stalwart man who stood upon the threshold,

and, placing her hands upon his shoulders, fell, sobbing, on his bosom. As Erskine slipped an arm around her waist his face was shining.

Turning to where Warrington, with a corpse-like face, was standing, he said quietly:

"They are in the vault, sir, and no one will know who put them there."

And then he saw his father!

Breathing heavily, Warrington, with dry lips, addressed the young man at the door.

"You—you mean that you placed them there yourself—without aid from others?" he asked in a cracked and husky voice.

"Yes," the young man answered gravely.

"When?"

"At midnight."

"But—but how—how—"

"I got the combination from the lips of a dying man who was more sinned against, perhaps, than sinning—a man who came to his death at the hands of Montresor, and whose body was afterward sunk in the lake."

As the chin of Andrew Warrington sank upon his breast, Sam Erskine clutched his arm. The old engineer was looking out toward the doorway, with wide, wondering eyes.

"Andy—Andy!" he gasped. "Is that your girl?"

Slowly raising his head, the general manager saw them—Fred Erskine and Louise. They were standing side by side, and holding hands. The general manager nodded.

"Yes, Sam, she's mine, and would to God the boy who stands beside her was her brother," he answered solemnly. "But though he is your son, he must be mine, as well. He must take the place of the boy that I have lost."

Again the old engineer clutched the speaker's sleeve.

"But, Andy, you—you forget what I was tellin' you when he came in," Sam Erskine protested, in quavering accents. "You forget I told you that out in Washington—"

"No, Sam, I don't forget," the general manager answered wearily. "But I have learned enough to know that somewhere out in the State of Washington your son was the champion of the honor of my family, and that he won his fight.

"If he wore a black mask on the night you saw him in your cab, he wore it honestly, and in my interest, rather than his own. And you, old friend, must have a care. This old world of ours plays strange tricks on us sometimes, and a father should beware, lest he misjudge his son."

"You know then—" the engineer began.

Warrington slipped an arm around his old friend's shoulders. "Yes, Andy, I know that your son, so far from being guilty of any wrongdoing, was acting the part of a hero on the night that you mistook him for a bandit," he said. "I know much that never will be made clear to you, and yet, as things are going now, there is much that I still fail to understand.

"All will be explained to me, I know, but until that explanation comes, I will suspect that it is partly by the efforts of your son that I have regained the daughter whom I feared was lost."

Within an hour he had the explanation from the lips of Louise, who told him of the sacrifice she had meditated in order to save the honor of the family name. While she was telling him her story, her father lovingly caressed her hands, but when she spoke of the part that Fred Erskine had played in the affair the light that illumined her eyes brought to the old man's lips the first smile that had rested there for many days.

Louise saw the smile, and her face grew crimson. Her father, however, nodded contentedly, and stroked her hair.

"It is well, Louise," he said reassuringly. "You like him. I would have it so."

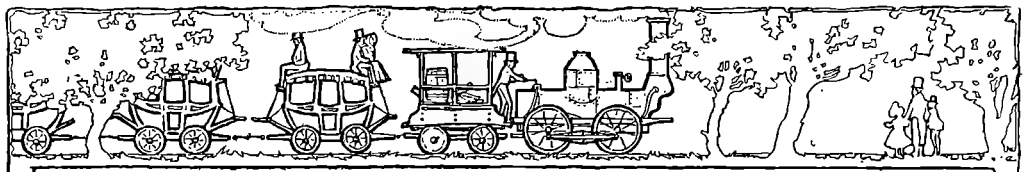
And so it came to pass that the story of the lost bonds was never told. How the bonds were taken, and by whom, the few persons who were aware of their disappearance never knew. To President Burbridge, Stanwood, the treasurer, reported that they were found, and the information was conveyed by Burbridge himself to the general manager.

Owing to the death of Joseph Warrington, several days before, it was known that he could not have returned them, and yet the secret of the combination of the vault was supposed to be in the possession only of Stanwood and young Warrington. The combination was altered without delay, but the manner in which the bonds had been restored always remained a mystery.

Warrington succeeded Burbridge as president of the road, and shortly after his elevation to this office, the engagement of Louise to the assistant superintendent of motive power of the road was announced.

The assistant superintendent of motive power was Frederick Erskine.

(The End.)



The Railroad Man's Brain Teasers.

Puzzling Problems that Promote Patience and Propagate a Propensity for Practical Proportion.

MR. HARRY L. PRATT, Port Henry, New York, sends in the following to corrugate our crown-sheets:

(1.) A train bound for Montreal, Canada, leaves Albany, New York, at 7 A.M., and travels at the rate of 60 miles an hour. A like train, bound for Albany, New York, leaves Montreal, Canada, at 9 A.M., and travels at the rate of 40 miles an hour. Which train will be the farthest away from Albany when they meet?

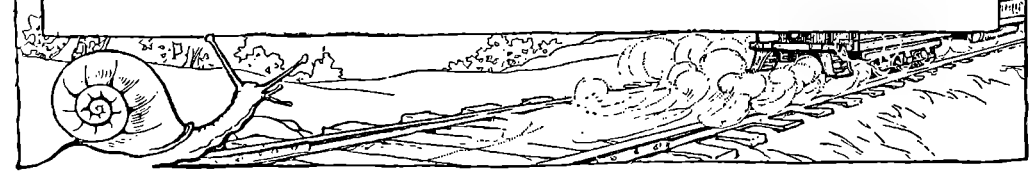
From Mr. O. W. Rowland, Paw Paw, Michigan, we have received the following:

(2.) A freight and a flier are on the same track, going in the same direction, freight ahead, flier following. The freight is making 10 miles per hour, the flier 60. At a certain point rear end of freight, A, is just 50 miles from front end of flier. How far will the freight have traveled when front end of flier is exactly half-way between point A and rear end of freight?

Also, this one from Mr. F. W. Haskell, president of the Carborundum Company, Niagara Falls, New York:

(3.) A railroad train, after traveling for one hour, meets with an accident which delays it one hour, after which it proceeds at three-fifths of its former rate of speed and arrives at the terminus 3 hours behind time. Had the accident occurred 50 miles farther on, the train would have arrived 1 hour and 20 minutes sooner. What is the length of the line, and what was the original rate of speed of the train?

The correct answers to these teasers will be published in our September number.



ON THE EDITORIAL CARPET.

The Eagle Eye Fixes Up a Few Pounds, Knocks, and Steam-Blows, and Gets Called On the Carpet Himself.

OUR fast freight for September is keeping the switching crews busy at present, but we'll have no trouble getting made up by the time the con is ready to give us the high-ball, and we expect to pull out of the yards on time to the second. There's not a flat or a gondola in the whole train, and every wheel in the stretch, from the big Mallet up ahead, to the little red caboose at the end, is under a brand-new standard box car, equipped with automatic coupler and air, and you won't find a single empty in the whole train.

They are all piled solid to the roof with the kind of freight that will keep without cold storage, and stand any amount of rough handling without developing a blemish.

Just run over a few of the waybills with us to get a line on the merchandise we are carrying, and if it doesn't make you want to climb aboard our string of side-door Pullmans we're very much inclined to miss our guess.

Among the fiction that is routed over the airline to success, "Coffin Varnish," by Cy Warman, is a rattling good yarn and a sure winner. It proves that the sobriquet for spirituous liquors is by no means a misnomer.

"The Goat Degree," by our old friend, Augustus Wittfeld, another railroad mystery successfully unraveled by the famous detective, "Carlock Bjones," will keep the laughter valve wide open. It is a worthy sequel to "The Gold Coupler," which we printed in July.

It is not hard to believe sometimes that a locomotive has a soul of its own, and the weird pranks of "Old Kate" in "The Engine's Leap," by Merritt Crawford, are apt to appeal to some of us who have seen with our own eyes the peculiar traits of a big iron horse.

"A Corner in Coyotes," by R. E. Culver, is another story that is well out of the ordinary, and "Billy's Unavoidable Delays," by George Foxhall, is also close to the highwater mark.

But we have almost forgotten the finest car-load in the whole train; one that won't get lost or sidetracked no matter how long her trip may be. We refer to the new serial, "On Short Time," by Horace Herr, author of "The Evolution of Almost," and "Being a Boomer Brakeman." It is a stirring story of Western railroad life, and deals with mighty undertakings and a hard-fought battle for love and fame, and it is told in Mr. Herr's most humorous vein. Keep your eye peeled for it if you don't want to miss one of the best railroad serials ever published.

Did you ever stop to realize that only a short while ago a wave of popularity for the narrow-gage road swept over the country, and the railroads in every State began to spike their rails closer, only to separate them again a little later when the standard gage was adopted.

C. F. Carter, whose special articles in THE RAILROAD MAN'S MAGAZINE are familiar to all our readers, gives us some interesting data on this subject in "The Riddle of the Gages," which will be published next month. Mr. Carter has been delving into railroad history, and has secured a lot of inside information on the evolution of the standard width of track.

Arno Dosch will give us an idea of the peculiar manner in which some of the biggest lines in this country came to be evolved. There are too many dreamers in this day and generation who are content to dream on and do nothing—but not so with these persistent geniuses of Mr. Dosch's collection. They were bent on making their dreams come true, and in the struggle toward that end have brought to themselves the honor and credit of having paved the way for the success of our modern railroads.

"The Old-Timer Tales" have not run out, and our September number will contain some reminiscences of the first great railroad detective, Allan Pinkerton, and the valuable services he rendered the Lake Shore in running to earth a number of skilful train-wreckers.

Walter Gardner Seaver is with us again with the second instalment of his lively series, "Told in the Roundhouse." The tales are better than ever, and contain new phases of life on a division that will make you sit up and take notice.

It's going to be a pretty heavy train, but our steam-gage shows plenty of pressure, and we don't intend to be bothered by flat wheels or loose couplings, so be ready to swing aboard when we pull out.

Get her hot for the September hill!

TO FIGHT FIRES.

SECRETARY WILSON has recently signed a memorandum of agreement with the Great Northern Railway Company, and also one with the Northern Pacific Railway Company, which provides for cooperation of the forest service and the railroads to prevent damage to the national forests from fires along all lines operated by these railroads. These agreements had already been signed by R. I. Farrington, vice-president of the Great Northern, and Howard Elliott, president of the

Northern Pacific, so that they are, by the signature of the Secretary of Agriculture, now in force.

The companies agree to clear and keep clear of inflammable material a strip of varying width as conditions may demand, up to two hundred feet beyond the right-of-way, and to provide all locomotives which do not burn oil with suitable spark arresters and other standard equipment to prevent the dropping of fire. The protective strip is to be designated jointly by representatives of the railroad and the forest service.

In fighting fires the railroads and the forest service will cooperate closely. Prompt notification to forest officers of all fires discovered by employees of the railroads is provided for. Telephone lines to make this possible will be put up by the forest service, using the companies' poles where this is desirable. Warning whistles will be sounded by locomotives on occasion.

Forces of fire-fighters will be assembled on the outbreak of fires, made up of forest officers, railroad employees, and such temporary labor as can be gathered by either. Except for salaries of regular employees, the cost of fighting fires which start within two hundred feet of the railroads will be borne by the companies, and all others by the forest service, unless it shall be shown in the first case that the railroads were not responsible, or, in the second case, that they were responsible for the outbreak of the fire.

The agreement provides that the forest service will regularly patrol the rights-of-way during the fire season. The work of clearing the strips satisfactorily, including disposal of all slash and refuse, is to be performed by the railroads under the supervision of the forest service.

Since the courts have sustained the right of the Department of Agriculture to collect damages from railroads running through national forests for fires which they cause, there is in this fact a strong inducement for railroad companies to join with the department in the effort to keep fires down; but other reasons are doubtless potent, and perhaps the most potent ones, in favor of this agreement.

The Northern Pacific, being a land-grant railroad, owns a great amount of timber on the alternate sections along its line. The Great Northern, although it is not a land-grant road, also has property at stake in its buildings and the line itself, operation of which may be seriously interfered with by forest conflagrations. The value of heavy timber in mountainous regions as a deterrent to avalanches, landslides, and floods is also to be considered. But, from the standpoint of a far-sighted business policy, a still broader argument is the relation of the forests to the general welfare of the regions whose traffic the railroads handle.

MR. YOUNG'S WORK-REPORT.

WE have always wanted to print the poem known as "Engine 2615," and are indebted to the author, Mr. Charles S. Young, of Wynne, Arkansas, for the copy which is appended.

This poem is the copy of a work-report turned in by Mr. Young at Helena, Arkansas, some years ago, when he was an engineer of the I., M. and S. Of course, he was disciplined by the m. m., but all that is past and a matter of history, and we are mighty glad to have this opportunity to add Mr. Young's poem to the many remarkable railroad documents in verse which have made such pleasant reading in The Carpet:

ENGINE, 2615.

MR. FOREMAN, I herewith hand you a report,
The only one really of its kind or sort,
On the famous engine "2615,"
In condition, about the worst ever seen.

She is one of these faithful kind, as you well know—
But 'tis a shame the way the pistons blow.
Wash out the boiler. Bore out the flues.
Of course this clause, to you, is not news.

The flues are squirting; caulk all the leaks,
Driving-boxes all so dry they squeak,
Steam-pipes leaking, pack throttle well,
Both main pins cut, and run hotter than ——.

All rod bushings loose on both sides,
Set up the wedges, line up the guides,
Air-pump jerks on both strokes,
Examine the valves and see if they are broke.

Take down the main rods, reduce the brass;
Above all, be sure to put in a water-glass,
Raise the draft-sheet a notch or more,
Fix the latch on the fire-box door.

I think from the way she cuts her fire,
The petticoat pipe should be a little higher.
The lagging all gone off the boiler-head,
Actually, it would roast a being, alive or dead.

Clean out the lubricator—neither side will feed—
I think from the condition, a new one she needs,
Clean the brake-valve, shorten the brake rods,
For when you want to stop, just trust in God.

When on her I step, to take my place—
Although nervy I'm claimed, fear is shown on my face—
For just one look at her, a history is known,
For the effects of many a hard trip is shown.

Nervous men should never ride this "'gine,"
For every move they would think it their time;
For the cab is really a traveling trapeze,
One cannot ride in it and feel at ease.

Springs all broken, engine riding on frame,
Really, of this eng. the company is ashamed.
What else is to be repaired, I shall not say,
For what is reported will not be done for many a day.

I have been with her for the past ten days.
Of handling an engine without brakes, I've learned many ways.
When I took her I was both young and gay—
Now my nerves are shattered and I'm almost gray.

For every move I make with her I expect a rod
To fly off and put my soul in the hands of God,
To see while working steam is out of the question,
I guess 'tis good for me I believe in predestination.

So, take pity on a being with a conscience and a heart,
Send a man to relieve me, for I was all in from the start;
Regards to yourself, engine, and crew,
If you will give me a pass home, I'll skidoo.

SKY-ROCKET RED.

SORRY WE CAN'T HELP.

WHILE we have announced in these columns on several occasions that we *are not* in a position to offer advice to those seeking railroad jobs, nevertheless, we are constantly in receipt of letters of which the following is a good example:

EDITOR, THE RAILROAD MAN'S MAGAZINE:

On what road would you advise a young man to start firing and get steady work?—H. G. W.

We would be very glad to furnish information of this character to applicants for positions, but, unfortunately, we are *absolutely unable to do so*. As success in railroading, as well as in any other field, depends solely on the thoroughness, application, and reliability of the man in question, we can only advise H. G. W., and the scores of others who have written us, that they will very likely have no trouble securing and holding a job on any railroad if they cultivate these very desirable qualities.

As for going further to tell him what railroad would be the best to apply to, we must ask our readers to be merciful to us in this respect, as our time is taken up with editing a magazine rather than running an employment agency, and we are unable to keep in touch with questions of this sort. Therefore, we must again say to those who write to us inquiring what roads need firemen, brakemen, and other employees, not to seek our advice, as we will be unable to be of assistance.

We recently received a letter in which the writer said, "I have been running a donkey-engine for six years, and would like to know where I can get a position to run a locomotive. I am fully able." We replied in our most courteous manner that we doubted if our correspondent were capable, and told him something of the requirements of running a locomotive. His reply was:

"You don't know what I can do. You ought to be painting a house."

May be. Who knows!

WOULD PAY FIFTY CENTS A COPY.

THE following letter is from an old railroad man down in Louisiana. It is the kind that we like to receive, and we wish that more of you boys would get down off the box-seat now and then and throw a few coals in our fire-box. Can any of you send in the complete words of the song for which our friend asks? We would like to publish them.

EDITOR, THE RAILROAD MAN'S MAGAZINE:

In the June number of THE RAILROAD MAN'S MAGAZINE, I came across an article, "Heraldry of the Railroads," giving the history of the Northern Pacific emblem. I have been in the engine service of the N. P., and always understood that the N. P. emblem represented two whales.

I also want to go after Mr. Robert H. Rogers. In his "The Roundhouse Foreman," I think old Pete Yeager put one over on the Old Man when he got him to put a piece of gas-pipe in the smoke-stack to split the fog. I have had the same thing done on soft-coal engines, only I used a bolt for the same purpose and got results. I have also had what they call a bridge inserted in the nozzle on single-exhaust nozzle engines. I have also stuck the plugging-bar down the smoke-stack and into the nozzle when an engine would blow the bridge out. This was on the old-style nozzle engines, but the article on the Roundhouse Foreman was O. K. That gentleman does have a few troubles of his own.

I have been reading THE RAILROAD MAN'S MAGAZINE for years now it seems, and pay fifteen cents a copy for it. I have to get it from the butchers on the passenger-train in this neck of the woods, but I would pay fifty cents a copy before I would miss one number.

I am going to ask for the remainder of a song. I do not know the title of it, but one verse of it runs:

Always together in sunshine or rain,
Always together on top of the train;
Away o'er the meadows,
Along 'neath the stars,
We're always together on top of the cars.

J. J. B., Pickering, La.

ANOTHER OLD SONG.

SO many of our readers have asked for the words of "The Montreal Express" that we are more than glad to be able to present them in full in this number. The correct name of the old poem is

SONG OF THE VERMONT DISASTER.

IN our country, far and near, each day we read or hear
Of shocking accidents on land or sea;
Your attention now I'll call to the latest of them all—
The Central Vermont Railway tragedy.

It was the Montreal Express, it was speeding at its best,
When near the Woodstock Bridge it struck a broken rail,
And with a fearful crash, down the dark abyss it dashed,
And few survived to tell the awful tale.

'Twas in the dead of night, no one can paint that sight:
Sleeping-cars were filled with living freight,
This ill-fated train was dashed to the river with a crash,
And a hundred souls went down to meet their fate.

The wreck was soon ablaze, horror met the victims' gaze,
And their frantic cries for help were sad to hear.
None responded to their call, they must have perished one and all,
Alas! kind friend, no help for them was near.

'Tis shocking to relate, tis sad to contemplate,
No one can paint a picture of that sight;
Little they dreamed that death was nigh, when they
bade their friends good-by,
Ere leaving home upon that fatal night.

There is one who'll not forget, that is little Joe
Megrett,
Who was with his father on that fatal train.
Though wounded by his fall, when he heard his
father's call,
To free him from the wreck he tried in vain.

"'Tis no use, my boy," said he, "there is no help
for me,"
And then the burning flames around him curled;
Little Joe began to cry when his father said
"Good-by,
We will meet again up in another world."

WAGES ADVANCE $100,000,000.

THE railway wage advances, already made or to be made before the end of the year, are now estimated at $100,000,000 for the entire country. This is the figure given by President Brown, of the New York Central. It includes, of course, many advances the details of which have not yet been settled.

Calculated on the Interstate Commerce Commission statistics as a basis, the wages paid to railway employees, under the new scale, will amount to $1,227,233,000 a year. This is arrived at by estimating the operating expenses of the present fiscal year from the monthly reports now available; applying the percentage of labor cost to total operating expenses in 1908, the latest year for which wage figures have been published; and adding the $100,000,000 estimated advance in wages this year.

The $1,227,233,000 which, it is estimated, will be paid out to employees annually under the new scale, compares with $1,072,386,000 in the fiscal year 1907, the year which holds the record for the volume of railway business.

Wages on the railroads were not reduced after the 1907 panic, so, that this year's advances are on top of those which were made in 1906, and the early part of 1907. The proportion of labor cost to total operating expenses has increased steadily for several years.

HELP TO SAVE THE OLD SONGS.

HERE'S another call for songs, boys, all the old ones you can remember; songs of the rail, or any other variety you may have come across, but particularly the ones that you have heard but never seen in print. Wouldn't it be a shame if all the good old songs that have sprung from the hearts of our fathers and contain so much of the spirit of the pioneers and the civilizing romance of a new continent should be lost and forgotten?

This is the way they feel about it at Harvard University, and John A. Lomax, associate professor of English in the Agricultural and Mechanical College of Texas, has asked us to help him in his work of collecting and preserving American ballads and folk-songs which he is carrying on as a Sheldon Fellow of Harvard University.

Professor Lomax hopes that a number of the readers of THE RAILROAD MAN'S MAGAZINE will be interested enough in the preservation of the old folk-songs to write out whatever verses they may remember and mail them to him at College Station, Texas. He will be very grateful for all contributions, and will see that they are carefully preserved and published.

WILLING TO STEAL IT.

EDITOR, THE RAILROAD MAN'S MAGAZINE:

I AM a constant reader of THE RAILROAD MAN'S MAGAZINE. I have run across a little mistake which, I think, is out of reason. I have handled some railroad material myself and never saw a keg of bolts for use in connecting rails together that would weigh one ton. Under the head of "What's In a Railroad" in the June number you say, "twelve kegs of bolts weigh twelve tons." This is not a kick on the magazine, understand, but I have been wanting to write to you for some time to let you know that somebody in this town is alive.

I remember one story you had about railroad thieves working in and out of St. Joseph, and I happen to know that that is true. I started reading THE RAILROAD MAN'S MAGAZINE before I worked on a railroad, and I think I will read it as long as I can buy, borrow, or steal it.

A ST. JOSEPH BOOSTER.

SPEED.

TO I. S., Fishkill Landing, New York, we send our thanks for this old poem. It's a bit out-of-date now, but may be one of our many railroad poets can write something that will describe modern speed quite as well:

TWENTY MINUTES LATE.

THE twain at last have struck their gait—
The engine and the engineer;
"The train is twenty minutes late!"
The smutty fireman gives a cheer.
He lets her out in giant strides;
She thrusts her slender arms of steel
Deep in the caskets at her sides;
The nervous creature seems to feel
For something precious hidden there;
Plucks out great handfuls of the power
That gives her sixty miles an hour;
And flings and tosses everywhere
Great volumes of the power asleep,
As if a million fleecy sheep
Turned out to pasture in the air.
With glittering elbows' ceaseless play,
She brightens night and darkens day.

"She buckles bully to the work;
She's not the kind of girl to shirk,"
The driver says, and tries the gage,
And never dreams he leads the age.
Full seventy feet at a single plunge,
And seventy feet at a single breath,
And seventy feet from instant death!
A little slower than the lunge

The lightning makes that stabs the night,
And faster than a falcon's flight.
'Tis seventy feet at every beat
Of heart and clock the train is hurled;
At such a rate, with such a mate,
Not eighteen days around the world!
Indianapolis Journal.

WILL "D. P." PLEASE WRITE.

EDITOR, THE RAILROAD MAN'S MAGAZINE:

WOULD you be kind enough to give me the address of "D. P.," who signs up for "The General" again, in your June issue?

My father, Francis Donahue, was in engine service in the vicinity of Chattanooga during Civil War times, and was captured with train, crew, engine, and all by the Confederate soldiers.

At this date, though late, I am anxious to learn some of the facts, and for that reason wish to correspond with "D. P.," or any one else in a position to give me information.

PHIL J. DONOHUE,
General Delivery, Amarillo, Texas.

A SEVENTY-MILE STRETCH.

EDITOR, THE RAILROAD MAN'S MAGAZINE:

IN the June issue of THE RAILROAD MAN'S MAGAZINE, Light of the Lantern department, you mention quite a number of long stretches of straight track, but, as there is no mention of the track from Dalhart, Texas, to Guymon, Oklahoma—a distance of seventy miles straight track on the Rock Island lines—I thought I would call your attention to it. I am employed at this division point of the Rock Island, as a locomotive engineer. The country is a rolling one, but there is one place where you can see an electric headlight a distance of about thirty-five miles. I am a constant reader of your magazine, and enjoy it very much, and think it fills the bill.—C. S. E., Dalhart, Texas.

THAT IS OUR BELIEF, TOO.

EDITOR, THE RAILROAD MAN'S MAGAZINE:

IN reading your June issue, I find a very interesting article headed, "With the Veterans on the Erie." I am interested in the article because many of the old-timers spoken of are well and kindly remembered by me, and it takes me back to the days when I, too, was one of the old Erie's men.

But there is one part of your article to which I take exception, and that is where you refer to the late Superintendent E. O. Hill as the "fighting superintendent." This is misleading. There never lived a more kind-hearted, sympathetic man than E. O. Hill. He was a strict disciplinarian—and where will you find a successful man of large affairs who is not?—but as a fighter, no, except as for the rights of humanity.

His motto was, like Davy Crockett's, "Be sure you're right, then go ahead."

He believed that the old men were better and more capable than new men. Few men were discharged by him, and after sufficient time had elapsed for proper discipline they were taken back. They then proved by their faithful service that the judgment of Superintendent Hill was correct.

Inquiry among the old-timers will bring out many cases which will bear out my assertion that no man was ever held in greater respect by the men under his command, or who had greater sympathy for them in their misfortunes.

I speak feelingly in this matter, for the reason that E. O. Hill was my father, and a more kind and indulgent parent never lived. He was a silent man, having little to say, and that to the point, but the kindliness of his motives were never questioned.

F. W. HILL,
Fairmount, W. Va.

WHERE "19" IS USED.

EDITOR, THE RAILROAD MAN'S MAGAZINE:

IN your June number, A. B. K., Clinton, Iowa, asks, "Are there any roads that use '19' orders altogether, with some additional safeguards?"

You answer that you don't know of any. I wish to say that I have worked here on the Utah division of the U. P., as brakeman, since the middle of March, and in that time I have seen but one "31" order. They have a schedule "31" order, but, with the one exception, I have spoken of, the "31" is invariably crossed out and "19" substituted.

The U. P., as you probably know, is protected on its main line by automatic block signals on both single and double track.

If this is any value to A. B. K., he is welcome to the information.

AN APPRECIATIVE READER,
Rawlins, Wyoming.

MALLETS ON THE N. P.

EDITOR, THE RAILROAD MAN'S MAGAZINE:

IN your reply to question of "G. H.," Miles City, Montana, on page 125, June issue of THE RAILROAD MAN'S MAGAZINE, you state that your records do not indicate any Mallet compound locomotives on the Northern Pacific Railroad.

Two or three years ago the Baldwin Locomotive Works built sixteen locomotives for the Northern Pacific Railway, which are practically duplicates of the large Mallet engines in use on the Great Northern Railway. These Northern Pacific engines weigh 351,000 pounds in working order, with 313,500 pounds on driving-wheels, and, with eight-thousand-gallon tenders, weigh two hundred and fifty tons.

I am unable to say as to whether or not any additional locomotives of this type have been built for the above-mentioned road.—C. D. W., East Cleveland, Ohio.

FROM AN OLD-TIMER.

EDITOR, THE RAILROAD MAN'S MAGAZINE:

IF you could, I would like you to publish something about the early days of the Rock Island, on the Illinois division. I was there when they had the old link-and-pin, and there were no air-brakes. Among the men of those days were Theodore Milar, S. Gifford, Buffalo Bill, Jim Lucas, and Rock Island Pat. On the right-hand side of the cab were Daddy Hamilton, James George, Al Dick-

erson, and many others I cannot recall at present. In those days they had a number of engines, some good for twelve or fifteen loads.

Two of these engines were silver-mounted, bell and all, and they were the pride of Mr. Cable and his able assistants. There was no double track in those days, Rock Island was the end of the road, and, some people thought, the end of the world. The split-switch was not thought of, and it was necessary at times to take the coal-pick and pound the ends of the rails over to make a siding.

OLD-TIMER, Denison, Texas.

SAW No. 12345.

EDITOR, THE RAILROAD MAN'S MAGAZINE:

Some time ago you published an article from one of your contributors mentioning the fact that he had been looking for a car with the numbers running from one to five, but had failed. Since then I have watched to see how soon I could spot one. To-day (May 23, 1910) at 2.32 P.M. in Savannah, Georgia, No. 34, there was an Illinois Central numbered 12345. If you want to follow it in its course for a time you can do so.

H. B. MEYERS, Operator,
Macon, Georgia.

DEATH ON THE RAIL; OR, McCARTHY'S LAST RIDE.

(One of the old poems for which we have had many requests.)

'MID the terrible booming of thunder,
Sharp lightning and deluge of rain,
Came the tidings of death and disaster
To Carlton's ill-fated train;
Where the wind's sudden raise in its fury
Soon blew in a merciless gale,
And sent flying along from the siding
A car to spread death on the rail.

'Twas a night when bravest might falter,
With heart-stricken fear and despair,
For it seemed as if legions of demons
Were out and at war with the air;
But the tide of humanity flowing
O'ercame every feeling of fright,
In the rescuing party who labored
So bravely that terrible night.

A sight that will ne'er be forgotten
While reason presides in the brain,
To behold all the dead and the dying
Who rode on that ill-fated train.
Heaven pity them all! Here's one other,
Whose equals on earth were but few;
He's my noble professional brother,
Who proved what a brave man can do.

All the newspapers called him a hero,
Who bravely met death at his post;
Ah, yes! He remained on his engine
While others turned white as a ghost.
Not a selfish thought entered his bosom,
He stood on the foot-board resigned,
With the lever reversed in the quadrant,
To save the three hundred behind.

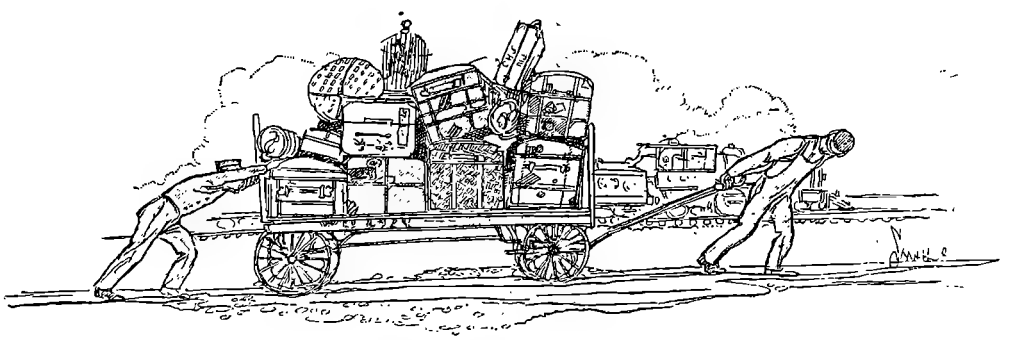
His fireman was pulled out, dismembered,
From under the wreck where he lay
(And he, too, played the part of a hero),
In fragments they bore him away.
They were there, true comrades together,
Their life-tide besprinkled the sod,
And within a few hours of each other,
Both spirits ascended to God.

Hurry Fame, with your brightest of laurels,
To deck poor McCarthy's last bed;
He has gone beyond earthly assistance,
And lies with the heroic dead.
He is one of the army of victims
Whom duty requires each year,
To be foremost where danger is thickest,
And die like a brave engineer.

Hear the multitude wail as we bear him,
All covered with flowers to the grave;
Note the grief of his kinsmen who'd tear him
Away from the ranks of the brave;
See his five little fatherless children,
Who huddle up close to the bier;
Hear the sobs of his heart-broken widow,
As she weeps for the dead engineer.

He is now laid to rest, and forever
He sleeps his last sleep 'neath the sod,
All the wails of the loved ones shall never
Recall his free spirit from God.
When on duty he never did falter—
Although he loved children and wife—
But laid down his all on its altar,
And, mind you, that all was his life.

Oh! I know glorious deeds are recorded
Above with a merciful pen;
And I know that all those are rewarded
Who act as the savers of men.
When Gabriel's trumpet gives warning
To call up the heroic dead,
For review on eternity's morning,
Brave "Jimmie" will march at the head.



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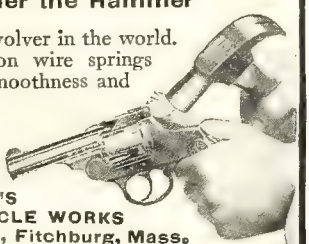

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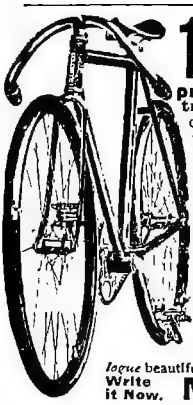

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A DEPARTMENT maintained for the small advertiser and for the convenience of the reader in quickly locating a wide variety of necessities for the home, the office, the farm, and for the man or woman who seeks business opportunities. There is virtually no want that may arise which cannot be supplied in these classified advertising pages.

Send for interesting booklet on Classified Advertising.

AGENTS & SALESMEN WANTED

HIGH-CLASS BOND SALESMEN WANTED, by Timber Company having large established business and acquaintance in United States and Canada. Our Profit-Sharing Deed-Protected Timber Gold Bonds represent the highest character of Investment Securities obtainable; secured by virgin forests of Pacific Northwestern States, that constantly increase in value. Bondholders guaranteed annual income for term of years; also, large share of profits insured thru sale of bonded timber lands. Some open territory in U. S. and Canada, for live, responsible representatives. Write *today,* giving references, experience, stating territory desired, to R. J. MENZ LUMBER Co., Seattle, Washington.

A HIGH-CLASS HOSIERY CONCERN requires few more intelligent and ambitious representatives to canvass fine line of hosiery to the better classes; sold only through our agents (no stores); liberal commission; makes permanent, profitable business (no free samples); experienced agents, men preferred. Krossknit Mfg. Co., Dept. E, 176 E. 127th St., N. Y.

WANTED—Wide-awake solicitors and capable general agents to sell new and winning invention for bath, shampoo and massage. Takes the place of expensive over-head showers costing $45.00 to $100.00 to install, yet sells for only $2.00, $3.00 and $4.00. Transforms any bath-room and has complete attachments for country homes without bath-rooms. Absolutely no competition. We protect territory. Sales-compelling samples furnished. Write today for new and successful selling plan. E. H. SELECMAN, Sales Manager, 604-210 Monroe St., Chicago.

Agents, male and female, can make $10 to $15 selling my imported French lawn waist patterns and Bonnaz Embroidered Princess patterns. Prices and particulars mailed on request. J. GLUCK, 621 B'way, New York.

AGENTS earn big money weekly selling our new styles embroidered waist patterns, princess dresses, petticoats, art linens, drawn work, silk shawls and scarfs, etc. Catalogue free. National Importing Co., Desk 21, 699 B'way, N. Y.

$25 WEEKLY AND EXPENSES to men and women to collect names, distribute samples and advertise. Steady work. C. H. EMERY, D13, Chicago, Ill

BECOME A MERCHANT—Without investment of a penny we help you to a highly profitable business by handling our Handy Dandy tailoring outfit. Hundreds of our agents are prosperous merchants. Outfit sent absolutely without cost to you. Write to-day. No experience required. WHITNEY TAILORING Co., 216 E. Van Buren St., Chicago.

AGENTS—NOTICE! $30.00 weekly; 90 Big Money-Makers. Easy selling plans. Everybody buys. Anybody can sell. Biggest profits. Samples free to our agents. Send for catalogue. R. C. MILLER Co., Box 155, Muskegon, Mich.

AGENTS make big money selling our new gold letters for office windows, store fronts, and glass signs. Any one can put them on. Write today for free sample and full particulars. METALLIC SIGN LETTER Co., 413 N. Clark St., Chicago.

LADY AGENTS—Greatest selling ladies' article on earth. Wonderful interest, big profit. Full patented illustrations mailed free. HAPPY GIRL Co., Dept. K., 230 Sumner Ave., Brooklyn, N. Y.

AUTOMATIC POTATO PEELER. Peels 24 potatoes perfectly in one minute. Milwaukee Fruit Jar Holder and Cover Wrench. The great fruit canning tools. 500 other red hot sellers. Beautiful sample case with 40 samples of best sellers sent free. Big profits. Geo. C. Edgren Co., Milwaukee, Wis.

LIVE AGENTS WANTED—Hustlers to handle our attractive combination package of soap and toilet articles—$1.25 premium with every 50c sale. Our Texas agent sold 100 boxes in one and a half days—profit $35.00. Write today for illustrated catalogue and profit-sharing plan. DAVIS SOAP COMPANY, 46 Union Park Ct., Chicago.

TAILORING SALESMEN WANTED to take orders for our Guaranteed Made-To-Order Clothes. Suits—$10 up. No capital required. Write today for territory and complete equipment. Address WARRINGTON W. & W. MILLS, 173 Adams St., Department 359, Chicago, Ill.

AGENTS & SALESMEN WANTED

AGENTS CAN MAKE 500% PROFIT handling our Gold Window Letters, Novelty Signs, and Changeable Signs, 800 varieties. Unlimited Demand. Catalogue Free. SULLIVAN Co., 1232 Van Buren St., Chicago, Ill.

$100 MONTHLY AND EXPENSES to trustworthy men and women to travel and distribute samples; big manufacturer. Steady work. S. SCHIEFFER, Treas., G3, Chicago.

GOLD STAMPING

NAMES, MONOGRAMS, LODGE EMBLEMS, ETC., burnt in gold leaf by you in 30 seconds; 15 minutes' practice gets the knack. Outfits complete. Can make from $50 to $500 per week. All department stores need you. 25c gets watch fob with name and lodge emblem showing work. HAMPSONS, 336 E. 19th St., New York.

BUSINESS OPPORTUNITIES

LEARN the truth about Mail Order Business before investing in "outfits." Important information and particulars, showing how to start M. O. business sent *free.* MAIL ORDER LIBRARY, Publicity Dept. M., 509 5th Ave., N. Y.

BUSINESS & CORRESPONDENCE SCHOOLS

YOUNG MAN—A position waiting for you; $20 to $50 per week; become a Telegraph operator; a few months' practice in your own home in spare time will qualify you to fill one of the thousands of positions open for young men as Telegraph and Wireless operators; our special practice key, together with the Morse code and full instructions, will be sent you on receipt of 25 cents. THOMAS EDISON JENNINGS, Inc., 462E. 8th Ave., New York City.

WANTED—RAILWAY MAIL CLERKS. Clerks at Washington, D. C., City Carriers and Postoffice Clerks. Examinations announced everywhere July 15th. Preparation free. Write immediately for schedule. FRANKLIN INSTITUTE, Dept. U2, Rochester, N. Y.

LOCAL REPRESENTATIVE WANTED. Splendid income assured right man to act as our representative after learning our business thoroughly by mail. Former experience unnecessary. All we require is honesty, ability, ambition and willingness to learn a lucrative business. No soliciting or traveling. This is an exceptional opportunity for a man in your section to get into a big-paying business without capital and become independent for life. Write at once for full particulars. Address E. R. Marden, Pres. The National Co-Operative Real Estate Company, Suite 550 Marden Bldg., Washington, D. C.

FOR THE TEETH

YOUR LOOSE TEETH can be made solid again, the recession of the gum checked. "Usmerja Forhan's" is a Specialist's Cure for soft, bleeding, suppurating or pus discharging gums. Mailed for $2.00. Can be purchased only through us. This is what is used in Dr. R. J. Forhan's practice for the cure of this disease, for which his minimum fee is $100.00. US-MER-JA CHEMICAL COMPANY, Suite 908 Wills Bldg., 286 5th Ave., New York City.

MISCELLANEOUS

Tobacco habit cured or no cost. Great discovery. Vegetable, safe, sure, pleasant. Permanent home treatment. Cures 98% of patients without effort. Removes effect of tobacco on all vital organs. Let me show you. King Ni-Ko 10, Wichita, Kan.

PATENT ATTORNEYS

PATENTS THAT PROTECT AND PAY. Advice and books free. Rates reasonable. Highest references. Best results. WATSON E. COLEMAN, Patent Lawyer, 612 F St. N. W., Washington, D. C.

PATENT SECURED or fee returned. Send sketch for free report as to patentability. *Guide Book* and *What to Invent*, with valuable list of Inventions Wanted, sent free. *One Million Dollars* offered for one invention; $16,000 for others. Patents secured by us advertised free in World's Progress; sample free. VICTOR J. EVANS & Co., Washington, D. C.

PHOTOGRAPHY

KODAKS—Graflex, Century, Premos and Hawk-Eye Cameras. A complete assortment to select from always in stock. Steinheil, Goerz, Zeiss, Cooke and Voigtlaender Lenses. Compound, Kollos and Multi-Speed Shutters. We will exchange your old cameras for a more modern equipment. Developing—Printing—Enlarging. All work done on premises. 8x10 Royal Sepia Enlargements Double Flexible Mounted, 50c. Herbert & Huesgen, Dept. A, 311 Madison Ave., N.Y.C.

"Pollard" finishing develops wonderfully clear, sharp detail in your negatives. First film, 6 exposures, developed free to new customers with individual advice. Sample print, prices, booklet "Film Faults" free for 2c. C. R. Pollard, Lynn, Mass.

Photographic—Finishing and Enlarging for the amateur photographer a specialty—Satisfactory results guaranteed. New list on request. American agts. for the celebrated Ross Lens. George Murphy, Inc., 57 East 9th St., New York.

POPULAR SHEET MUSIC

SONG POEMS WITH OR WITHOUT MUSIC wanted for publication. All subjects. Original. Examination and criticism free. A. K. EATON, 419 6th Ave., New York.

SAVE ONE-HALF ON ALL YOUR POPULAR MUSIC. A postal will bring you our long list of all the popular and latest hits. SEMPLE MUSIC CO., 74 West Ave., Norwalk, Connecticut.

FLYING MACHINES

BUILD A FLYING MACHINE. Lots of fun. Sells at big profit. "How to Build a Bi-Plane Glider" tells all about it. Price 25 cents. Catalog of handy scientific books free. SPON & CHAMBERLAIN, 123 R Liberty St., New York.

REAL ESTATE

DISTRICT OF COLUMBIA

(10% NET) WASHINGTON CITY improved real estate is an absolutely safe and far more profitable investment than Government Bonds. Write for Booklet No 29. ROSS & PHELPS, Ins., Washington, D. C.

STAMPS AND RARE COINS

WE BUY COINS & STAMPS. Premiums paid up to 5000%. Send for free booklet A. May be worth many dollars to you. ROYAL MONEY & STAMP CO., 150 Nassau Street, New York.

$7.75 Paid For Rare Date 1853 Quarters; $20 for a $½. Keep all money dated before 1880, and send 10c at once for New Illustrated Coin Value Book, 4x7. It may mean your fortune. CLARKE & Co., Coin Dealers, Le Roy, N. Y.

TYPEWRITERS

I WANT TO CORRESPOND with persons who are about to buy a high-grade typewriter, and object to paying the high prices generally asked by manufacturers and dealers. Any make on approval. Catalogue, bargain list and valuable information sent free. A. E. Atchison, 4127 W. 21st St., Chicago.

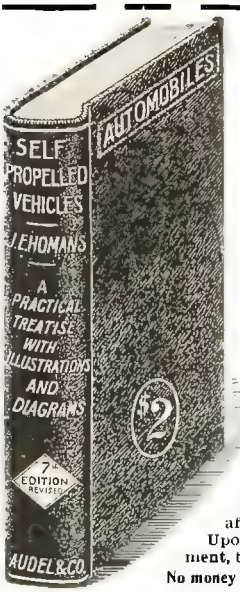
GENUINE TYPEWRITER BARGAINS. No matter what make, will quote you lower prices and easiest terms. Write for big bargain list and illustrated catalogue. L. J. PEABODY, 63 Minot Bldg., Boston, Mass.

TELEGRAPHY

TELEGRAPHY, both Morse and Wireless, taught quickly. R. R. train wire and complete wireless station in school. Big demand for operators. Living expenses earned. Correspondence courses if desired. Catalogs *free*. DODGE'S INSTITUTE, 36th St., Valparaiso, Ind. Established 1874.

YOUNG MEN WANTED
For Chauffeurs
AUTOMOBILE
Salesmen, Demonstrators, and Repairmen
EARN $25 TO $50 WEEKLY
Demand for these trained men can't be supplied. The work is pleasant and instructive, out-of-doors, and the hours short. You can prepare yourself for one of these positions in 10 weeks by a few hours' study each week. We teach you the entire subject by our simple course of instruction by mail. It is very interesting, practical and thoroughly efficient because it's personal. Ask our graduates who are earning $25 weekly or more in positions we obtained for them.
First Lesson Is Free
Write for it to-day. Let us prove our claims.
Empire Auto. Institute, 625 Empire Bldg. Rochester, N. Y.
The Original Automobile School
Chauffeurs and competent men furnished owners and garages.

HOW TO RUN AN AUTO



"Homans' Self Propelled Vehicles" gives full details on successful care, handling and how to locate trouble.

Beginning at the first principles necessary to be known, and then forward to the principles used in every part of a Motor Car.

It is a thorough 1910 course in the Science of Automobiles, highly approved by manufacturers, owners, operators and repairmen. Contains over 400 illustrations and diagrams, making every detail clear, written in plain language. Handsomely bound.

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ON APPROVAL

The only way the practical merit of this MANUAL can be given is by an examination of the book itself, which we will submit for examination, to be paid for or returned, after looking it over.

Upon receipt of the following agreement, the book will be forwarded.

No money in advance required, sign and return

Theo. Audel & Co., 63 Fifth Ave., New York

Kindly mail me copy of **Homans' Automobiles**, and, if found satisfactory, I will immediately remit you $2.00, or return the book to you.

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OCCUPATION.....

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In answering any advertisement on this page it is desirable that you mention THE RAILROAD MAN'S MAGAZINE.

IGNORANCE of the laws of self and sex will not excuse infraction of Nature's decree. The knowledge vital to

A Happy Marriage

has been collected from the experience of the ages, in

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(Illustrated)

By William H. Walling, A. M., M. D.

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Knowledge a Young Wife Should Have.
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Knowledge a Mother Should Impart to Her Daughter.
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"Sexology" is endorsed and is in the libraries of the heads of our government and the most eminent physicians, preachers, professors and lawyers throughout the country.

All in one volume, illustrated, $2, postpaid.

Write for "Other People's Opinions" and Table of Contents.

Puritan Pub. Co., 739 Perry Bldg., Phila., Pa.

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Traveling Salesmen earn from $1,000 to $10,000 a year and expenses. Over 600,000 employed in the United States and Canada. The demand for good Salesmen always exceeds the supply. We will teach you to be one by mail and assist you to get a good position. We maintain the largest **FREE EMPLOYMENT BUREAU** in the world and receive calls for thousands of Salesmen. We have assisted thousands of other men to secure good positions and better salaries and we can help you. Hundreds of our graduates who formerly earned $25 to $75 a month have since earned from $100 to as high as $1,000 a month and expenses. Thousands of positions now open. If you want to secure one of them and increase your earnings, our free book *"A Knight of the Grip"* will show you how. Write (or call) for it today. Address nearest office

Dept. 403 National Salesmen's Training Association
Chicago, New York, Kansas City, Minneapolis
San Francisco, Atlanta.

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WHEN IRONING WRINKLES OUT OF THE CLOTHES NOT TO IRON WRINKLES INTO THE FACE!

THE IMPERIAL SELF-HEATING FLATIRON is always ready for an easy day's ironing, or for a few minutes' pressing. NO HEATED ROOM—NO STOVE, GAS, or ELECTRICITY needed. No tubes or wires to get in the way. Just a simple iron that heats itself with a small amount of alcohol or gasoline.

25,000 now in use—that tells the story.

Write for free booklet—it gives all details about the iron, and the address of your nearest agency.

The Imperial Brass Manufacturing Co., 455 Jefferson Street, Chicago

NOTE: Agents wanted everywhere. Easy sales—for women *want* the iron. 3,000 sold by one agent. Satisfaction guaranteed.

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SEE THEM BEFORE PAYING!

These Gems are chemical white sapphires. Can't be told from diamonds except by an expert. Stand acid and fire diamond tests. So hard they can't be filed and **will cut glass.** Brilliancy guaranteed 25 years. All mounted in 14K solid gold diamond mountings. Will send you any style ring, pin or stud on approval—all charges prepaid—**no money in advance.**

☞ **Write for Free illustrated booklet, special prices and ring measure.**

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is the name of an interesting booklet we would like to send to every manufacturer and every business man who is not now taking advantage of the best selling force in the advertising field to-day.

We can suggest a solution of the problem of national distribution, with the jobber, the retailer, or the consumer; we can help the manufacturer to develop his business along entirely new lines.

A postal brings full details of this service. Write to-day, and tell us what we can do for you.

THE FRANK A. MUNSEY COMPANY **175 Fifth Avenue, New York**

Are You Boss of Your Own Job?

In other words is someone else paid for assuming the responsibility for your work?

The ***trained*** man is the responsible man. The responsible man is the well-paid man, while the ***untrained*** man, the chap who does only the ***detail*** part of the work at another's bidding, is paid just so much for his labor, and no more.

If ***you*** are only a ***detail*** man, the International Correspondence Schools can fit you for positions higher up. If you are earning only a small wage the I. C. S. can ***raise your salary.*** Whether you live near or far away the I. C. S. will ***go to you***—in your spare time—and train you for your ***chosen occupation*** without encroaching on your working time.

Mark the attached coupon and learn how you can secure an I. C. S. training that will ***make you boss of your own job.*** Marking the coupon costs you nothing and entails no obligation. Mark it to-day. It means

SUCCESS

The I. C. S. can help you just as it has helped thousands of other ambitious men who at the rate of 300 every month are VOLUNTARILY reporting salaries raised and positions bettered as the direct result of I. C. S. help. During May the number heard from was 301.

Mark the coupon ***to-day.*** Mark it ***NOW.***

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INTERNATIONAL CORRESPONDENCE SCHOOLS,
Box 1003, SCRANTON, PA.

Please explain, without further obligation on my part, how I can qualify for the position, trade or profession before which I have marked X.

General Foreman	Electrical Engineer
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Air-Brake Repairman	Assayer
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TAN, FRECKLES, SUNBURN, REDNESS, BLACKHEADS, ECZEMA & ALL SKIN ERUPTIONS, MAKES THE SKIN SOFT, SMOOTH AND VELVETY. DELIGHTFUL TO USE. PREVENTS CHAPPING. IS READILY ABSORBED.
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Keeps the skin soft, smooth and velvety, so that healthy Summer tan only adds to the natural attractiveness of a Milkweed Cream Complexion. The peculiar properties of Milkweed Cream keep freckles away, relieve soreness and smarting due to sunburn.

The first requisite for beauty is a healthy skin. Spots and blemishes, no matter how small, disfigure and mar the complexion. Loose skin, crow's feet and wrinkles (due to unnecessary rubbing) are also serious complexion faults. A sallow or colorless skin, as well as undue redness, are Nature's danger signals.

MILKWEED CREAM

gives relief from these and all other complexion ills. For a decade it has been recognized as the best face cream and skin tonic that skill and science can produce.

Milkweed Cream is a smooth emollient, possessing decided and distinct therapeutic properties. Therefore, excessive rubbing and kneading are unnecessary. Just apply a little, night and morning, with the finger tips, rubbing it gently until it is absorbed by the skin. In a short time blemishes yield to such treatment and the skin becomes clear and healthy; the result—a fresh and brilliant complexion.

To prove to you the advisability of always having Milkweed Cream on your dressing-table, we shall be glad to send a sample free, if you write us.

F. F. INGRAM CO., 82 Tenth St., Detroit, Mich., and Windsor, Can.

IMPROVES BAD COMPLEXIONS — PRESERVES GOOD COMPLEXIONS

The Little Fairy Girl

is simply a symbol of the purity of FAIRY SOAP. FAIRY SOAP is made from edible products; it contains no filler, coloring matter or adulterant of any kind.

Pay 25c or 50c for soap if you will, but you will get no more soap merit and purity than are found in FAIRY SOAP at 5c a cake—and, in nine cases out of ten, not so much.

FAIRY SOAP—the pure, white, floating, oval cake—is sold at all good grocery and drug stores.

THE N. K. FAIRBANK COMPANY, CHICAGO

Fairy Soap was granted highest possible awards at both St. Louis and Portland Expositions.

"Have You a Little 'Fairy' in Your Home?"

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for convenience in your summer writing

The More You Write

while you are away on your vacation, the more you will know the convenience of owning a Waterman's Ideal. The successful combination of pen and ink into this one device, annually shows that the care and thought given to the manufacture of Waterman's Ideals are of increasing service to everyone who has writing to do.

The More You Appreciate

efficiency, the more valuable will Waterman's Ideals become. You will have at least one with you all the time. There is even a Safety type that you can carry filled in your waist-blouse and it cannot spill. A minute to fill it and you are prepared to write at least 20,000 words without a stop—or any inefficiency which would cause you to question the supremacy of Waterman's Ideals.

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L. E. Waterman Co.,

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12 Golden Lane, London.

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